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## **Fluctuations of glaciers 2005-2010**

Edited by: Zemp, Michael ; Frey, Holger ; Gärtner-Roer, Isabelle ; Nussbaumer, Samuel U ; Hoelzle, Martin ; Paul, Frank ; Haeberli, Wilfried

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# FLUCTUATIONS OF GLACIERS 2005–2010 (Vol. X)

A contribution to the  
Global Terrestrial Network for Glaciers (GTN-G)  
as part of the Global Terrestrial/Climate Observing System (GTOS/GCOS),  
the Division of Early Warning and Assessment and the Global Environment Outlook  
as part of the United Nations Environment Programme (DEWA and GEO, UNEP),  
and the International Hydrological Programme (IHP, UNESCO)

Prepared by the  
World Glacier Monitoring Service (WGMS)

ICSU (WDS) – IUGG (IACS) – UNEP – UNESCO – WMO

2012

**FLUCTUATIONS OF GLACIERS 2005–2010**  
with addenda from earlier years

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**2005–2010**  
**(Vol. X)**

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Department of Geography  
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Switzerland

**wgms**  
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Under the auspices of  
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## PREFACE by UNEP

Climate change and its impacts on ecosystems and human well-being is one of the biggest challenges for mankind in the 21<sup>st</sup> century. Consistent trends in glacier changes are key indicators of ongoing climate change. Moreover, glaciers are an important component of the Earth's hydrological system and the current accelerated melting has significant impacts on the environment and human activities, including natural hazards, water and energy supply, and global sea level rise. The long-term monitoring of glaciers is therefore a basic requirement for a scientific assessment of global glacier distribution, changes and related impacts.

The standardized compilation and free dissemination of glacier data from all over the world, as undertaken by the *World Glacier Monitoring Service* and its predecessor organizations, is a major contribution in support of the work of organizations such as the *United Nations Framework Convention on Climate Change* (UNFCCC) and the *Intergovernmental Panel on Climate Change* (IPCC). Glacier changes are also among the most prominent indicators used by the *United Nations Environment Programme* (UNEP) in assessment reports such as the *Global Environment Outlook* (GEO), the UNEP Yearbook series, or various editions of *Global Environmental Alert Service* (GEAS) bulletins.

The tenth volume of the *Fluctuations of Glaciers*, covering the observation period between 2005 and 2010, continues the series of detailed reports on measurements of glacier fluctuations reaching back to the late 19<sup>th</sup> century. It presents the latest compilation of scientific data on glacier changes in length, area, volume and mass from more than 800 glaciers around the globe. The report points out a continued overall ice loss at high rates which is consistent with ongoing global warming and corresponding energy fluxes towards the surface of the earth.

The comprehensive *Fluctuations of Glaciers* reports represent the backbone of the scientific data compilation which comes with full meta-information on principal investigators, national correspondents, their sponsoring agencies and publication related to the reported data series. These five-yearly reports are complemented by the bi-annual *Glacier Mass Balance Bulletin* which presents the data in summary form for non-specialists through the use of graphic presentations rather than as purely numerical data. Together these series built the scientific background for concise and illustrated UNEP publications such as the *Global Outlook for Ice and Snow* (2007), *Global Glacier Changes: facts and figures* (2008), or *Measuring Glacier Change in the Himalayas* (2012) which were published for a wide range of audiences.

UNEP commends the work of the WGMS and partners on this very important global issue and is grateful to all those who have supported and contributed to this long-term, global effort.

Peter Gilruth, Dr.  
Director, Division of Early Warning and Assessment





## PREFACE by GCOS

In 2012 the *Global Climate Observing System* (GCOS) celebrated its 20<sup>th</sup> anniversary. In 1992, when it was founded upon recommendation of the *Second World Climate Conference* (WCC-2), certain fundamental climate records were already in place. The establishment of the GCOS was a response to the need to improve the understanding of the climate system observations in all its domains, i.e., atmosphere, ocean and land, in a coordinated and standardized way. Together the intergovernmental and international organizations most involved in observing the climate system, namely the WMO, the *Intergovernmental Oceanographic Organization* (IOC) of UNESCO, the *United Nations Environment Programme* (UNEP) and the *International Council for Science* (ICSU) joined forces to establish the GCOS as a co-sponsored program coordinating a system of observing systems for climate.

A similar process followed in the terrestrial domain, as the need increased for a deeper understanding of global change in the Earth System. This led to the establishment of the *Global Terrestrial Observing System* (GTOS) jointly sponsored by UNEP, UNESCO, FAO, ICSU and WMO which is a program for observations, modelling, and analysis of terrestrial ecosystems to support sustainable development. GTOS facilitates access to information on terrestrial ecosystems so that researchers and policymakers can detect and manage global and regional environmental change.

As of today five *Global Terrestrial Networks* (GTNs) have been defined for mountains, permafrost (GTN-P), glaciers (GTN-G), hydrology (GTN-H), and river discharge (GTN-R) to better structure some of the terrestrial observations and to improve networking among the contributing and responsible institutions. Each of these terrestrial networks is a joint, multi-institution effort.

Through GCOS' strong partnerships with users and providers of climate-related observations, a list of internationally agreed-upon GCOS *Essential Climate Variables* (ECVs) was established, which today serves as a guideline for managers of observing systems for climate, which can be ground-based or space-based, i.e., observed from satellites. These ECVs also include a number of cryospheric variables, like snow cover, glaciers, permafrost, ice caps, and ice sheets. These terrestrial observations needed for a climate observation system are discussed at the GCOS-GTOS *Terrestrial Observation Panel for Climate*, or TOPC, at which the WGMS is represented actively.

GCOS is providing the Parties to the *United Nations Framework Convention on Climate Change* regularly with information related to observing systems for climate. The GCOS reported already twice on the *Adequacy of the Global Observing Systems for Climate in Support of the UNFCCC*, on the *Progress on the Implementation of the Global Observing System for Climate in support of the UNFCCC 2004–2008* and published an update of its *Implementation Plan for the Global Observing System for Climate in Support of the UNFCCC* in 2010, which are all widely recognized and serve as resources for network management and planning. All these reports will be updated over the next four to five years.

While GCOS provides global overviews, it always stresses that the responsibility for the operation of the global observing systems for climate that form the GCOS remains at the individual institutional, and thus national, levels.

The *World Glacier Monitoring Service* (WGMS) is the international renowned center that provides highly relevant climate information to a broad user community, being one example of a nationally funded activity that benefits many.

The GCOS secretariat appreciates the efforts the WGMS staff puts into providing these services and the sustained support of the Swiss government for this unique undertaking. We look forward to continuing our fruitful and excellent cooperation.

Carolin Richter, Dr.  
Director, GCOS Secretariat

## PREFACE by ICSU (WDS)

Over the last decade, a consensus has developed in the scientific community – and is now increasingly popularized in society – that humankind is making a considerable and global impact on the Earth system. Worldwide scientific observations from various disciplines show a clear impact of human activities on our planet. Climate scientists are recording a global warming of the atmosphere, biologists are reporting a dramatic loss of biodiversity, oceanographers are observing the acidification of the oceans, and hydrologists are documenting changes in water cycles. All of these phenomena have adverse effects on our society and are already affecting food security, health, and even political stability. Scientific acknowledgment of these anthropogenic human-driven changes culminated recently when earth scientists even considered the introduction of a new geological epoch following the Holocene: the Anthropocene. More than ever, with such dramatic changes occurring in our environment, scientists have a responsibility to ensure preservation and availability of underlying scientific data that enable the understanding of these changes and possible mitigation of their negative effects.

The ICSU *World Data System* (ICSU (WDS)) builds on a more than a half-century legacy of geophysical data preservation and dissemination through its predecessor bodies, the *World Data Centres and Federation of Astronomical and Geophysical data analysis Services*, the latter of which the *World Glacier Monitoring Service* (WGMS) was a member. ICSU (WDS) is a growing international federated system, consisting today of 40 member organizations – including the WGMS, in addition to a dozen more supporting members – dealing directly with data curation and data analysis services. The primary goals of ICSU (WDS) are to ensure long-term stewardship of quality-assessed data for research and education, and provision of such data and related data services to the international scientific community and other stakeholders. Adoption of state-of-the-art data management, curation, and online distribution of multidisciplinary datasets make these goals achievable. Although our main focus is long-term stewardship of scientific data, member organizations share overarching principles – such as full and open access to metadata and data, development and adoption of standards, quality control practices, analysis and metadata services, and data publication services across domain boundaries – that facilitate collaboration and interdisciplinary data activities on an equitable basis worldwide.

WGMS plays a key role in the observation, collection, standardization, and dissemination of data documenting global-scale changes that occur in glaciers. These activities are an important contribution to, and unique building block of, ICSU (WDS). The series *Fluctuations of Glaciers* – prepared by the WGMS every 5 years – includes the present Volume X, which covers the 2005–2010 period and contains more than 10,000 data records from 800 glaciers. It is a unique data publication initiative and an important tool for researchers in critical fields such as climatology, glaciology, and hydrology. Thus, this WGMS activity should be strengthened and encouraged since it provides significant scientific input for better understanding and accurate assessment of the state of our planet.

Mustapha Mokrane, Dr.  
Executive Director, ICSU (WDS) International Programme Office

Jean-Bernard Minster, Prof. Dr.  
Chair, ICSU (WDS) Scientific Committee



## FOREWORD by IACS (IUGG)

Long-term observations of glacier fluctuations as a climate indicator have increasing societal and academic value. Internationally coordinated systematic measurements of glacier fluctuations started as early as in 1894, and this work has been continued until present. Ice sheets, mountain glaciers, ice caps and other perennial ice masses form an important part of the hydrological cycle, and have a major influence on global sea level. The impact of variations in melt-water discharge from mountain glaciers affects downstream domestic water supply, irrigation, and hydro power production. In the arid high-mountain ranges of central Asia, glacier runoff can be the sole source of water for communities, which are particularly vulnerable to impacts from retreating glaciers.

In 2007, the *International Union of Geodesy and Geophysics* (IUGG) recognized the importance of the cryosphere in the climate system and established the *International Association of Cryospheric Sciences* (IACS). Field and satellite monitoring of glaciers is an important activity for IACS, which initiated and advises the *Global Terrestrial Network for Glaciers* (GTN-G). The GTN-G promotes monitoring and archiving of glacier data. The *World Glacier Monitoring Service* (WGMS) is part of this network, and contributes with substantial high-quality archiving and publishing of systematic data.

The current Volume X of the WGMS's publication series *Fluctuation of Glaciers* covers the observation period from 2005 to 2010, and includes more than 10,000 data records from 800 glaciers around the world. All previous volumes in the publication series also cover five year periods, except Volume I from 1959–1965. The current Volume X contains all data types as provided in previous volumes, and new data such as single point measurements from mass balance programs, and geodetic volume changes from space-borne sensors. Inclusion of the new data types are welcomed and are seen as an important contribution to climate research. Terms in the publication are based on the *Glossary of Mass Balance and Related Terms* (Cogley et al. 2011) promoted by IACS.

The IACS wishes to thank the Director of the WGMS, Dr. Michael Zemp, and his staff their excellent work in publishing this latest volume of the series. The IACS extends a vote of thanks also to the scientists and fieldworkers, and encourages them to continue their efforts to provide and share high-quality observations.

Cecilie Rolstad Denby, Prof. Dr.  
Head, Division of Glaciers and Ice Sheets, IACS/IUGG



## PRELIMINARY REMARKS AND THANKS

The present issue of the *Fluctuations of Glaciers* (FoG) focuses primarily on the time period from 2005 to 2010 and marks the tenth volume of this publication series (PSFG 1967, 1973, 1977, 1985; WGMS 1988, 1993, 1998, 2005, 2008). It was prepared by the *World Glacier Monitoring Service* (WGMS) and is the most recent addition to the continuing series of publications containing standardized data on current changes in glaciers throughout the world extending back to the initiation of the internationally coordinated glacier monitoring (Forel 1895).

The FoG Volume X marks both a continuation and a change at the same time. It continues the tradition of periodical publication of standardized data and information on glacier changes. This is still the main driver of the active international data collection and should be regarded as working tool for the scientific community, especially with regard to the fields of glaciology, climatology, hydrology, and quaternary geology. In this context, the printing and shipment of the volumes to several hundred libraries and institutions all over the world represents a core element in securing the long-term availability of the collected data and published maps. The present volume includes some mild but significant improvements in the reported data. For the first time, reconstructed front variation series are reported in order to extend the observation series back into the *Little Ice Age* and beyond (cf. Zemp et al. 2011b). Also, glacier mass balance data are complemented with results from point measurements, which represent the basic observations of every mass balance program and might be of special value for climatic interpretation and model validation. Furthermore, a great effort was made to extend the reported data on geodetic volume changes with results from an extensive literature search. The terms used in this publication follow the *Glossary of Glacier Mass Balance and Related Terms* by Cogley et al. (2011). This new glossary aims to update and revise Anonymous (1969) which has long been the actual standard of mass balance terminology.

The WGMS was formed in 1986 by the merger of predecessor services to maintain and continue the internationally coordinated collection of standardized data on glacier distribution and changes (Haeberli et al. 2007, 2008). Today, the WGMS is a permanent service of the *World Data System* of the *International Council for Science* (ICSU/WDS) as well as the *International Association of Cryospheric Sciences* of the *International Union of Geodesy and Geophysics* (IUGG/IACS), and works under the auspices of the *United Nations Environment Programme* (UNEP), the *United Nations Educational, Scientific and Cultural Organization* (UNESCO), and the *World Meteorological Organization* (WMO). Over the past years, the organization of the WGMS has been professionalized and the funding of the central office at the *Department of Geography* of the *University of Zurich* (GIUZ/UZH), Switzerland, has been secured through long-term funds from the *Swiss GCOS Office* at the *Federal Office of Meteorology and Climatology* (MeteoSwiss). Since the publication of the last FoG volume, the cooperation with partner and auspice organizations has been formalized and intensified in the framework of the *Global Terrestrial Network for Glaciers* (GTN-G; cf. Chapter 6)

The objective of the FoG publication series at 5-yearly intervals is to reproduce a global set of data which

- affords a general view of glacier changes,
- encourages more extensive measurements,
- invites further processing of results,
- facilitates consultation with other data sources, and
- serves as a basis for research.

The FoG publication series builds on periodic calls-for-data and a series of original guidelines and instructions (Forel 1895, Østrem and Stanley 1969, UNESCO 1969, 1970, UNESCO/IAHS 1970, 1973, Østrem and Brugman 1991, Kaser et al. 2003) which have in part been superseded and made more specific by instructions for the submission of data for the FoG Vol. X (2005–2010), the last time issued by the WGMS in September 2011 for this volume (cf. the Appendix in the present volume). The data published in the present volume are also available in digital form. The guidelines for data submission and order as well as metadata on the available fluctuations series are available on the homepage of the WGMS (<http://www.wgms.ch>).

The present volume was successfully completed thanks to the cooperation and efforts of the *National Correspondents* of the WGMS, the *Principal Investigators* of the various glaciers, and their *Sponsoring Agencies* as listed in Chapters 2 and 3. In addition to the contributions from this international scientific collaboration network, the main work was performed by the staff members of the central office of the WGMS at GIUZ/UZH. Mustapha Mokrane and Jean-Bernard Minster (ICSU/WDS), Julian Dowdeswell and Cecilie Rolstad Denby (IUGG/IACS), Jaap van Woerden (UNEP), Siegfried Demuth (UNESCO), and Vladimir Ryabinin (WMO) assisted in ensuring proper international administration and coordination. Special thanks are due to Andrea Barrueto, Ursina Gloor, Barbara Naegeli, Kathrin Naegeli, Amelie Paszkowski, Deborah Raulin, Mike Stainsby, Dorothea Stumm, and Sara Würmli for their assistance with data collection, and to Susan Braun-Clarke for editing the English.

Since the establishment of the *GTN-G Advisory Board* chaired by IUGG/IACS, Liss M. Andreassen (Norway), Anthony Arendt (U.S.A.), Graham Cogley (Canada), Julian Dowdeswell (United Kingdom), Cecilie Rolstad Denby (Norway), and Vladimir Ryabinin (Switzerland) have accompanied our work as scientific consultants.

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### 1.1 Preparation of Volume X of *Fluctuations of Glaciers*

The data compilation for this volume is based on annual calls-for-data for the observation periods 2005/06 to 2009/10, including revised guidelines and Excel-based data submission forms. The calls-for-data were sent out to *National Correspondents* (NCs) in September, one year after each of the respective observation periods, in order to enable the investigators to properly analyse and publish their data before making it available to the scientific community and wider public. In addition to the new data submitted by the NCs, existing series were completed, revised and updated with the help of the PIs. Additional material was collected from the literature, where special focus was placed on extending the dataset of geodetic thickness and volume changes (cf. Table D). Within a new initiative, reconstructions of worldwide glacier front variations based on well-dated historical or geomorphological evidence were integrated into the WGMS database. The reconstruction of palaeo-glacier front positions and their dating is usually more complex and based on multiple sources. The metadata stored ensures a standardized description of the data including the most relevant information on methods and uncertainties of the data, but also provides space for individual remarks.

A press proof of this volume was sent out to the NCs and PIs for double-checking and commenting in September 2012, followed by the correction and update of the data series and meta data according to the received feedback, as well as by the final compilation of the annex maps, prefaces and foreword by the overarching organizations. Printing and shipment of the FoG Vol. X was done in December 2012.

Besides the improvements mentioned in the Preliminary Remarks, only minor changes were introduced relating to the format and content of Volume X in order to ensure maximum continuity and comparability with the published data series. The received metadata pertaining to the submitted glacier fluctuation data are summarised in one chapter for all data tables. The digital information in the WGMS database is the most complete and up-to-date of all, more so even than the data printed in the tables of this volume. Updated information and available data can be found and browsed on the WGMS website (<http://www.wgms.ch>). Open access to the related *Fluctuations of Glaciers* database is provided with the newly introduced Digital Object Identifier (DOI) for scientific datasets: <http://dx.doi.org/10.5904/wgms-fog-2012-11>.

The present FoG Volume X contains information on 800 glaciers from 33 countries/regions, consisting of more than 10,000 observations (cf. Table 1.1). Chapter 4 contains 9 sections on index measurements from six countries as well as information on 20 special events in eleven countries/regions. Following a well-established tradition, eleven special glacier maps from six countries are included in the back pocket of this volume with brief comments on each map given in Chapter 5. The WGMS is again grateful for the donation of all these maps and will make them available in digital format on its website.

Table 1.1 Observations contained in this volume

|  | <i>No. of<br/>glaciers</i> | <i>No. of<br/>data<br/>records</i> | <i>No. of<br/>countries/<br/>regions</i> |
|--|----------------------------|------------------------------------|--|
| Variations in the position of the glacier fronts | 644                        | 2130                               | 27                                       |
| Reconstructed front variations series            | 36                         | 1,770                              | 10                                       |
| Summary data on mass balance study results       | 128                        | 2,020                              | 23                                       |
| Addenda of mass balance results (earlier years)  | 4                          | 590                                | 3  |
| Mass balance versus altitude                     | 72                         | 510*                               | 19                                       |
| Point mass balance data                          | 34                         | 2,010                              | 11                                       |
| Changes in area, volume, and thickness           | 58                         | 180**                              | 17                                       |
| Index measurements                               | 9                          | 1,000                              | 6  |
| Special events                                   | 20                         | 20                                 | 11                                       |
| Total information contained in this volume       | 803                        | 10,230                             | 33                                       |

\* 1 count per glacier and year

\*\* 1 count per glacier and year for each area change, volume/thickness change, and elevation information

## 1.2 Organization of the Present Volume

The following types of data are presented in this volume:

|            |   |
|------------|---|
| Table A    | General Information on the Observed Glaciers  |
| Table B    | Variations in the Position of Glacier Fronts, 2005–2010   |
| Table BB   | Variations in the Position of Glacier Fronts, Addenda from Earlier Years (including reconstructed frontal variation series) |
| Table C    | Mass Balance Summary Data, 2005–2010  |
| Table CC   | Mass Balance Summary Data, Addenda from Earlier Years   |
| Table CCC  | Mass Balance versus Altitude for Selected Glaciers, 2005–2010   |
| Table CCCC | Point Mass Balance Data, 2005–2010  |
| Table D    | Changes in Area, Volume and Thickness, 2005–2010  |
| Table F    | Index Measurements and Special Events presented in Chapter 4  |

Sources of data and related comments can be found in Chapter 2. Within each data table, the glaciers are organized according to the country where they are situated. Table A provides the user with general information on the glaciers of a particular country or region, and also lists which data are available for these glaciers in related tables. An ALPHA-BETIC INDEX of glaciers is given at the end of this Volume to allow easy location of the data for any glacier name within the various tables.

Originally, the identification system for glaciers consists of:

- (1) a name of up to 15 (recently extended to 30) alphabetical and numerical characters,
- (2) a PSFG number of five digits with an alphabetical prefix denoting the country.

Although in some cases it was necessary to abbreviate the names of glaciers, it should always be possible to compare data for any particular glacier in the present volume with data in previous volumes. The PSFG number, as provided by the National Correspondents, shall help to identify glaciers with the same, unknown or changing names. The number is intended to remain the same for every glacier through all the volumes of the FoG. In most cases the numbers were given to glaciers in some historical sequence and may therefore appear to be somewhat unsystematic. Already in the last volume, the alphabetical prefix denoting the country was adapted from a historically evolved one- or two-digit code to the ISO 2-digit-country code (ISO 3166-1-alpha-2), as proposed by the *International Organization for Standardization* (ISO). However, the abbreviation SU has been maintained for C.I.S. in order to facilitate comparison with former FoG volumes. In order to ensure unambiguity in our database, a numeric WGMS\_ID has been introduced and is listed together with glacier name and PSFG number in the ALPHABETIC INDEX.

It is strongly recommended that all data tabulated in Tables A to D are used in consultation with the relevant sections in the text; in the case of Table F, the data are given within the text of Chapter 4. Furthermore, when using or citing data from this volume (as WGMS 2012), we strongly suggest to also check and refer to the original sources/references of the data – given in the relevant chapters of the text – for full details on measurement methodologies and background.

Starting with Volume VIII of the FoG series, the data have been arranged alphabetically according to (i) country/region name and (ii) glacier name.

| Country/Region | Prefix | Country/Region | Prefix |
|----------------|--------|----------------|--------|
| Antarctica     | AQ     | Italy          | IT     |
| Argentina      | AR     | Japan          | JP     |
| Austria        | AT     | Kenya          | KE     |
| Bolivia        | BO     | Mexico         | MX     |
| C.I.S.         | SU     | Nepal          | NP     |
| Canada         | CA     | New Zealand    | NZ     |
| Chile          | CL     | Norway         | NO     |
| China          | CN     | Pakistan       | PK     |
| Colombia       | CO     | Peru           | PE     |
| Ecuador        | EC     | Poland         | PL     |
| France         | FR     | Slovenia       | SI     |
| Germany        | DE     | Spain          | ES     |
| Greenland      | GL     | Sweden         | SE     |
| Iceland        | IS     | Switzerland    | CH     |
| India          | IN     | Turkey         | TR     |
| Indonesia      | ID     | U.S.A.         | US     |
| Iran           | IR     |                |        |





## CHAPTER 2 INFORMATION ON THE OBSERVED GLACIERS AND SUBMITTED DATA

The following sections provide an overview on the submitted metadata, principal investigators, national correspondents, and their sponsoring agencies, as well as publications related to glacier data presented in Tables A–F. Full addresses of the sponsoring agencies and organizations holding original data are given in Chapter 3. The information in this chapter is listed by country/region.

Additional and clearly illustrated information can be found in the report on *Global Glacier Changes: facts and figures* (WGMS 2008) jointly published by WGMS and UNEP. The report provides a review of the available data up to 2005, the global distribution of glaciers and ice caps, and their changes since the maximum extents were reached in the so-called *Little Ice Age*. The report is out of print but still available online at: <http://www.grid.unep.ch/glaciers/>

### 2.1 Antarctica (AQ)

Data were submitted by P. Skvarca (IAA-DNA) and F.J. Navarro (UPM).

Reported investigators of glacier front variations are P. Skvarca, E. Ermolin, and S. Marinsek (IAA-DNA) for Bahía del Diablo.

Reported investigators of glacier mass balances are P. Skvarca, E. Ermolin, and S. Marinsek (IAA-DNA) for Bahía del Diablo; F.J. Navarro (UPM) for Hurd and Johnsons.

A selected recent publication is Molina et al. (2007).

### 2.2 Argentina (AR)

Data submission was coordinated by L. Espizua (IANIGLA) with contributions by J. Strelin (IAA-DNA, DNA-UNC, CITERRA) and R. Iturraspe (UNTDF, DGRH).

Reported investigators of glacier front variations are L. Espizua, P. Pitte, G. Maldonado, F. Díaz, P. Lizana, L. Ferri Hidalgo, and H. Gargantini (IANIGLA) for Azufre, Barroso, Canon Hispano, Güssfeldt, Horcones Inferior, Peñon, Salinillas, San Jose, Tupungato 01/02/03/04, and Vacas; P. Leclercq (IMAU) based on Le Quesne et al. (2009) for Humo.

Reconstructed frontal variation series for Ameghino, Lago del Desierto I–III, Narváez Grande, Piedras Blancas, and Torre were reported by M.H. Masiokas (IANIGLA) based on Masiokas et al. (2009a, b). Frontal variations for Esperanza Norte was reported by L. Ruiz (IANIGLA) based on Ruiz et al. (2012). The series for Frías was reported by M.H. Masiokas, P. Pitte, and R. Villalba (IANIGLA) based on Villalba et al. (1990) and Masiokas et al. (2009b).

Reported investigators of glacier mass balances are R. Iturraspe (UNTDF, DGRH) and J. Strelin (IAA-DNA, DNA-UNC, CITERRA) for Martial Este.

Selected recent publications are Strelin and Iturraspe (2006), Leiva et al. (2007), Milana (2007), Espizua and Pitte (2009), Masiokas et al. (2009b), and Iturraspe (2011).

### **2.3 Austria (AT)**

Data submission was coordinated by A. Fischer (IMGI) with contributions by G. Patzelt (OEAV), B. Hynek (ZAMG), and H. Slupetzky (DGGS).

Front variations were measured by the Austrian Alpine Club (OEAV) on behalf of G. Patzelt and A. Fischer (OEAV). Complete information on investigators of glacier front variations for the observation period 2005–2010 are given in Patzelt (2007, 2008, 2009) and Fischer (2010, 2011). Further investigators of glacier front variations are B. Hynek, R. Böhm, G. Weyss, C. Kroisleitner, M. Dragosics, S. Reisenhofer, and R. Unger (ZAMG) for Goldbergkees, Kleinfleisskees, and Wurtenkees.

Reported investigators of glacier mass balances are A. Fischer, G. Markl, and M. Kuhn (IMGI) for Hintereisferner, Jamtalferner, and Kesselwandferner; H. Slupetzky (DGGS) for Stubacher Sonnblickkees; L.N. Braun and C. Mayer (CGGBAS) for Vernagtferner; B. Hynek, S. Reisenhofer, R. Unger, W. Schöner, and the late R. Böhm (ZAMG) for Goldbergkees, Kleinfleisskees, Pasterzenkees, and Wurtenkees. Note that the mass balance of Wurtenkees is influenced by artificial snow production and snow management around the ski slope on the upper part of the glacier.

Information on geodetic glacier changes for Hintereisferner, Jamtalferner, Kesselwandferner, and Vernagtferner is based on Fischer (2011).

The results of the glacier investigations carried out by OEAV are published in their annual reports (Patzelt 2007, 2008, 2009, Fischer 2010, 2011). Selected recent publications related to Austrian glacier fluctuations are from Lambrecht and Kuhn (2007), Escher-Vetter et al. (2009), and Fischer (2009, 2011b).

### **2.4 Bolivia (BO)**

Data submission was coordinated by A. Soruco (IGEMA).

Reported investigators of glacier front variations are J.C. Mendoza Rodríguez (IRD, IHH) for Chacaltaya; various staff from IRD, IHH, and SENAMHI for Charquini Sur and Zongo.

Reconstructed frontal variation series for Charquini Norte, Oeste, Sur, Sureste, Jankhu Uyu, Wila Lluxita, and Zongo were reported by P. Leclercq (IMAU) based on Leclercq (2012) and Rabatel et al. (2006, 2008).

Reported investigators of glacier mass balances are E. Perroy (IRD), J.C. Mendoza Rodríguez (IHH, SENAMHI), B. Francou (CNRS), and A. Soruco (IGEMA) for Chacaltaya, Charquini Sur, and Zongo.

Information on geodetic glacier changes for Zongo is based mainly on Soruco et al. (2009).

## **2.5 C.I.S. (SU)**

Data submission was coordinated by V.V. Popovnin (MGU) in coordination with I. Sevskiy (IGNANKaz) and A. Yakovlev (UZ-HydroMet).

Reported investigators for glacier front variations are A.A. Aleynikov, Y.A. Zolotaryov, and V.V. Popovnin (MGU) for Djankuat; Y.K. Narozhnyi (TGU) for Dzhelo, Korumdu, Leviy Aktru, Leviy Karagemsk, Maliy Aktru, No. 125 (Vodopadny), and Praviy Karagemskiy; N.E. Kasatkin (IGNANKaz) for Ts. Tuyuksuyskiy; P. Leclercq (IMAU) based on Kutuzov and Shahgedanova (2009), Zolotarev (2009) and Petrakov, D. (personal communication) for glaciers No. 211, 324, 392, 393, 394, Ashu-tor South (326), Birdzhalychiran, Bituktube, Bolshoy Azau, Bolshoy Chontor, Chungurchatchir, Garabashi, Gregoriev, Irik, Irikchat, Karachaul, Kolpakovsky, Kyukyurtlyu, Maliy Azau, Mikelchiran, Popov, Terskol, Ulluchiran, Ullukol, and Ullumalienderku.

Reported investigators of glacier mass balances are N.E. Kasatkin and K.G. Makarevich (IGNANKaz) for Ts. Tuyuksuyskiy; O.V. Rototayeva, A.M. Kerimov and G. A.Nosenko (IGRAN) for Garabashi; V.V. Popovnin (MGU) for Djankuat (for the period 2007–2010 mass balance data for Djankuat are preliminary, approved data are in preparation); Y.K. Narozhnyi (TGU) for Leviy Aktru, Maliy Aktru, and No. 125 (Vodopadny).

## **2.6 Canada (CA)**

Data submission was coordinated by M.N. Demuth (GSC) with contributions by M. Beedle (UNBC) and J.G. Cogley (TU/G).

Reported investigator for glacier front variation is M. Beedle (UNBC) for Castle Creek.

Reported investigators of glacier mass balances are the late R.M. Koerner and D.O. Burgess (GSC) for Devon Ice Cap NW and Meighen Ice Cap; J.G. Cogley and M.A. Ecclestone (TU/G) for Baby Glacier and White; M.N. Demuth (GSC) for Helm, Peyto, and Place.

Information on geodetic glacier changes for Kaskawulsh is based mainly on Foy et al. (2011); for Place on Menounos and Schiefer (2008); and for Tweedsmuir on Arendt et al. (2008).

## **2.7 Chile (CL)**

Data submission was coordinated by G. Casassa (CECS) with contributions by F. Escobar Caceres (DGA).

Glacier front variations for Noroeste, Oeste M, Oeste N, Oeste S L, and Oeste S R were reported by P. Leclercq (IMAU) based on Schneider et al. (2007) and Dickmann (2008).

Reconstructed frontal variation series for Cipreses was reported by P. Leclercq (IMAU) based on Leclercq (2012), Araneda et al. (2009) and Le Quesne et al. (2009).

Reported investigators of glacier mass balance are F. Escobar Caceres and C. Garin (DGA) for Echaurren Norte.

Information on geodetic glacier changes for Juncal Norte is based mainly on Bown et al. (2008); for Mocho SE on Rivera et al. (2002); and for Pichillancahue and Turbido on Rivera et al. (2008).

## **2.8 China (CN)**

Data submission was coordinated by Z. Li (CAREERI).

Reported investigators of glacier front variations are Z. Jin, Z. Zhou, and M. Cao (CAREERI) for Urumqi Glacier No. 1; and Z. Jin (CAREERI) for Lapate No. 51; P. Leclercq (IMAU) based on Liu et al. (2010) for Hailuoguo.

Reported investigators for glacier mass balances are H. Li, H. Yang, Z. Zhou, and W. Wang (CAREERI) for Urumqi Glacier No. 1.

Information on geodetic glacier changes of Hailuoguo is based mainly on Liu et al. (2010); for Kangwure on Ma et al. (2010); for Lalong, Panu, Tangse No. 2, Xibu, and Zhadang on Bolch et al. (2010).

## **2.9 Colombia (CO)**

Data submission was coordinated by J. Ramirez Cadenas (INGEOMINAS) with contributions by J.L. Ceballos Lievano (IDEAM).

Reported investigator for glacier length changes and mass balances is J.L. Ceballos Lievano (IDEAM).

Selected recent publications are Ceballos et al. (2006) and Poveda and Pineda (2009).

## **2.10 Ecuador (EC)**

Data were submitted by B. Cáceres Correa (INAMHI).

Reported investigators are B. Cáceres Correa (INAMHI) and B. Francou (CNRS, IRD) for Antizana 15 Alpha.

## **2.11 France (FR)**

Data and information were submitted by C. Vincent (CNRS).

Reported investigators are E. Thibert and D. Richard (CEMAGREF) for Blanc and Sarennes; C. Vincent, M. Vallon and L. Reynaud (CNRS) for Argentière, Bossons, Gébroulaz, Mer de Glace and Saint Sorlin; P. René (AM) for Ossoue (Pyrénées).

Reconstructed front variations for Mer de Glace and Bossons were reported by S.U. Nussbaumer (GIUZ) based on Nussbaumer et al. (2007) and Nussbaumer and Zumbühl (2012). Reconstructed frontal variation series for Argentière was reported by P. Leclercq (IMAU) based on Leclercq (2012), Bouverot (1958), Vivian (1975), and Huybrechts et al. (1989), originally based on Mougin (1912).

Six glaciers were measured in the framework of the French program GLACIOCLIM:

Saint Sorlin, Sarennes, Argenti re, Mer de Glace, Gebroulaz and Ossoue. Mass balances are observed on the whole area of these glaciers. Mass balance data are regularly checked with geodetic methods using photogrammetric techniques. Moreover, thickness variations and ice flow velocities are measured on selected cross sections. Meteorological stations have been set up close to Saint Sorlin and Argenti re in order to study the relationships between climate change and mass balance fluctuations (Six et al. 2009). Mass balance of Sarennes, the longest glacier mass balance series in the Alps, have been thoroughly studied (Thibert et al. 2008, Thibert and Vincent 2009) in order to extract the temporal signal of winter and summer mass balance (Eckert et al. 2011).

Dynamic behavior of Saint Sorlin has been studied using numerical modeling (Gerbaux et al. 2005, Le Meur et al. 2007). This study shows that this glacier could disappear before the end of the 21<sup>st</sup> century. Dynamic behaviour of Argenti re has been studied from long-term observations (five decades) of ice flow velocities and thickness variations (Vincent et al. 2009). Velocity fluctuations are synchronous over the entire area studied. In the largest part of the glacier, no compressing/extending flow change has been observed over the last 30 years and thickness changes have been driven solely by surface mass balance changes. However, on the tongue of the glacier, thickness changes do not depend on surface mass balance but are driven mainly by changes in the longitudinal strain rate.

Satellite imagery was used to study the ice flow velocities and volume changes of Mer de Glace (Berthier et al. 2005, 2006) and the *Equilibrium Line Altitude* of several glaciers in the French Alps (Rabatel et al. 2005, 2008). This study allowed the reconstruction of annual mass balances of these glaciers.

## **2.12 Germany (DE)**

Data submission was coordinated by L.N. Braun (CGGBAS).

Reported investigator is W. Hagg (LMU) for H llental, Schneeferner N., and Schneeferner S.

## **2.13 Greenland (GL)**

Data submission was coordinated by A.P. Alstr m (GEUS) with contributions by B. Hynek (ZAMG).

Glacier front variations for Akulliit, Assakaat, Freya, Kangiusaq, Mittivakkat, Motzfeldt E, Motzfeldt W, Napasorsuaq, Narssaq Br , Qingua Kujalleq, Saarloq, Saqqaq, Sermiar-suit, Sermikassak, Serminnguaq, Sissarissut, Soqqaap, Tunorsuaq, and Umiartorfiup were reported by P. Leclercq (IMAU) based on Weidick (1968), Citterio et al. (2009), and Leclercq et al. (2012).

Reconstructed frontal variation series for Lyngmarksbr  and Tunorsuaq were reported by P. Leclercq (IMAU) based on Yde and Knudsen (2007), and Leclercq et al. (2012).

Reported investigators of glacier mass balances are B. Hynek (ZAMG) for Freya; N.T. Knudsen (DESA), B. Hasholt (DGGC), and S. Mernild (CPM-LA) for Mittivakkat.

Information on geodetic glacier changes for the Flade Isblink Ice Cap is based mainly on Rinne et al. (2011), ambiguous results for the period 2004 to 2008 stem from different sensors: i.e., 680 mm are calculated based on the GLAS sensor (onboard ICESat), 400 mm come from RA-2 measurements (onboard EnviSAT); the value for the period 2002 to 2009 (210 mm) as well are based on RA-2 measurements.

## **2.14 Iceland (IS)**

Data submission was coordinated by O. Sigurðsson (IMO) with contributions by F. Pálsson (IES) and Þ. Þorsteinsson (IMO).

Reported investigators for glacier front variations are Á. Hjartarson (IGS, ISOR) for Gljúfurárjökull; Á. Sólbergsson (IGS) for Leirufjarðarjökull; B. Pálsson (IGS) for Brókarjökull and Fláajökull; B. Kristinsson for Geitlandsjökull; B. Oddsson (IGS, IES) for Kvislajökull; B. Skúlason (IGS) for Sátujökull; E. Gunnlaugsson (IGS) for Sólheimajökull.; E.H. Haraldsson (IGS) for Blágnípujökull, Kirkjujökull, and Loðmundarjökull; E.R. Sigurðsson and J.K. Þórhallsdóttir (IGS) for Hagafellsjökull E and W; E. Guðmundsson (IGS) for Heinabergsjökull; G. Gunnarsson and S.B. Þorláksdóttir (IGS and IMO) for Svínafellsjökull, Falljökull, and Virkisjökull; S. Hilmarsson (IGS) for Tungnárjökull; H. Haraldsson (IGS) for Hryningsjökull; H. Jónsson (IGS) for Síðujökull, Skeiðarárjökull W, and Skeiðarárjökull. M; H. Björnsson (IGS) for Breiðamerkurjökull. W. C, Breiðamerkurjökull. W. A, Fjallsjökull. BRMFJ, Fjallsjökull. G-SEL, Hrutárjökull, and Kviárjökull; I. Aðalsteinsson (IGS) for Kaldalónsjökull; I. Kaldal (IGS, ISOR) for Sléttjökull; J. Gissurarson (IGS) for Öldufellsjökull;; K.G. Eyþórsdóttir (IGS, IMO) for Jökulkrökur; L. Jónsson (IGS, NEA) for Múlajökull S. and Nauthagajökull; O. Sigurðsson (IGS, IMO) for Kötlujökull and Kverkjökull; R.F. Kristjánsson (IGS) for Morsarjökull, Skaftafellsjökull, and Skeidararjökull E1, E2, and E3; S.M. Hreinsdóttir (IGS) for Skálafellsjökull; S. Sigurðsson (IGS) for Rjúpnabrekkujökull; T. Theodórsson (IGS) for Gígjökull; Þ. Jóhannesson (IGS) for Reykjarfjarðarjökull.

Reconstructed frontal variation series for Sólheimajökull W. was reported by P. Leclercq (IMAU) based on Sigurðsson (1998), Mackintosh et al. (2002), and Leclercq (2012).

Reported investigators for glacier mass balances are F. Pálsson , H. Björnsson (IES), and H.H. Haraldsson (NPC) for Breiðamerkurjökull, Brúarjökull, Dyngjujökull, Eyjabakkajökull, Köldukvislarjökull, Tungnárjökull, and Langjökull Southern Dome;; Þ. Þorsteinsson (IMO) for Hofsjökull E, Hofsjökull N, and Hofsjökull SW.

Selected recent publications are Aðalgeirsdóttir et al. (2006), and Sigurðsson et al. (2007).

## **2.15 India (IN)**

Data submission was coordinated by C.V. Sangewar (GSI) with contributions by M.F. Azam (CNRS).

Glacier front variations were reported by GSI and are based on Kaup et al. (2011) as well as Leclercq (2012) based on Raina and Srivastava (2008), Bhambri and Bolch (2009), Raj (2011), Bhambri et al. (2012).

Reported investigators for glacier mass balances are A. Ramanathan (SES) and M.F. Azam (CNRS) for Chhota Shigri; C.V. Sangewar (GSI) for Hamtah.

Information on geodetic glacier changes for Chhota Shigri is based mainly on Azam et al. (2012).

## **2.16 Indonesia (ID)**

A. Ruddell (A.R.) reported that there are no current in-situ measurements available from Indonesia.

Selected recent publications are Klein and Kincaid (2006) and Kincaid (2007).

## **2.17 Iran (IR)**

Data was submitted by N. Karimi (WRI)

Information on geodetic glacier changes for Alamkouh is based on Karimi et al. (2012).

## **2.18 Italy (IT)**

Data submission was coordinated by C. Baroni (DST-UPi).

Reported investigators of glacier front variations are A. Fusinaz (CGI) for Pré de Bar and Toules; A. Borghi (SGL) for Dosegu; A. Galluccio (SGL) for Castelli Or.; A. Viotti (CGI) for Estellette; A. Gusmeroli for Campo Sett; A. Mazza (CGI) for Aurona, Belvedere (Macugnaga), and Locce Set.; A. Almasio (SGL) for Sissone; A. Proh (SGL) for Disgrazia; A. Salvetti (SGL) for Scerscen Inferiore; A. Tamburini (SGL) for Campo Sett and Suretta Merid; A. Toffaletti (SGL) for Venerocolo; A. Cerutti (CGI) for Brenva; A. Giorcelli (CGI) for Valtournanche; C. Iulita (SGL) for Cedec and Gran Zebur; C. Smiraglia (CGI) for Sforzellina and Ventina; C. Voltolini (CGI) for Vedretta de la Mare; D. Godone (CGI) for Belvedere (Macugnaga) and Locce Sett.; D. Colombarolli (SGL) for Cedec and Campo Sett; E. Congiu (SGL) for Pizzo Ferre; E. Massa Micon (CGI) for Monciair; F. Villa (SGL) for Campo Sett and Suretta Merid.; F. Pollicini (CGI) for Fond Occid. and Or., Gliaietta Vaudet, Goletta, Lavassey, Soches Tsanteleina, and Torrent; F. Rovedo (SGL) for Pissana Occ.; F. Cambieri (SGL) for Ventina; F. Marchetti (SAT) Amola, Care Alto Or., Lares, Lobbia, Mandrone, Nardis Occ., and Niscli; F. Rogliardo (CGI) for Bessanese, Ciamarella, Collerin D'arnas, Martelot, Mulinet Merid. and Sett., and Sea; F. Fornengo (CGI) for Basei; G. Casartelli (CGI) for Forni and Pizzo Scalino; G. Gotta (CGI) for Aouille; G. L. Gadin (CGI) for Gruetta Orient.; G. Franchi (SGI) for Gran Pilastro/Gliedferner, Malavalle/Übeltalferner, Neves Or./Östl. Növesferner, Pendente/Hangenderferner, and Quaira Bianca/Weisskarferner; G. Taufer (SAT) for Travignolo; G. Cibir (CGI) for Collalto/Hochgallferner, and Gigante Centr. and Occ.; G. Bracotto (CGI) for Lauson; G. Mortara (CGI) for Piode; G. Alberti (SAT) for Lares; G. Barison for Rosim/Rosimferner; G. Cola (CGI) for Forni and Palon della Mare Lobo Or.; G. Fontana (SGL) for Dosegu; G. Perini (CGI) for Antelao Inferiore (Occ.) and Sup., Cevedale Forcola/Fürkeleferner and Cevedale Principale/Zufallferner, Cristallo, Vedretta Alta/Höhenferner, and Vedretta Lunga/Langenferner; G. Stella (CGI) for Ventina; S. Sartori and L. Pastori (SGAA) for Gran Vedretta Occidentale/Hochferner and Gran Vedretta Orientale/Griessferner; L. Carturan (SAT) for Caresè (Occidentale, Centrale, and Orien-

tale); L. Farinella (SGL) for Palon Della Mare Lobo Centr. and Or.; L. Lorenzetti (SGL) for Col Della Mare I; L. Mercalli, D. Cat Berro, and F. Fornengo (SMI, CGI) for Ciardoney and Basei; L. Rosso (CGI) for Clapier and Peirabroc; L. Motta and M. Motta (CGI) for Jumeaux; M. Bettio (CGI) for Morion Or.; M. Cesco Cancian (CGI) for Fradusta and Travignolo; M. Moccagatta (CGI) for Brenva; M. Tesoro (CGI) for Grandes Murailles and Tza De Tzan; M. Bizez (CGI) for Gran Val and Lauson; M. Butti (SGL) for Marovin and Lupo; M. Nicolino (CGI) for Aouille; M. Pecci, A. Barbolla, P. D'Aquila, L. Lombardi, T. Zanoner, and S. Pignotti (IMONT) for Calderone; M. Urso (SGL) for Predarossa; M. Fioletti (SGL) for Gran Zebbru; M. Tron (CGI) for Agnello Mer. and Fourneaux; M. Palomba (CGI) for Grade di Verra; M. Varotto (CGI) for Marmolada Centr.; P. Pagliardi (SGL) for Disgrazia and Venerocolo; P. Piccini (CGI) for Indren Occ.; P.P. Degli Esposti (SGAA) for Neves Or./Östl. Növesferner; P. Borre (CGI) for Gran Val and Lauson; P. Bruschi (SGAA, UI/HA) for Fontana Bianca/Weissbrunnferner; R. Miravalle (CGI) for Nel Centrale; R. Ossola (CGI) for Hohsand Sett. (Sabbione Sett.); R. Scotti (SGL) for Campo Sett, Cassandra Or., Fellaria Occ., Lupo, and Suretta Merid; R. Garino (CGI) for Rutor; R. Sinibaldi (SGAA) for Vedretta di Solda/Suldenferner; R. Serandrei Barbero (CGI) for Lana/Äusseres Lahner Kees, Rosso Destro, and Valle del Vento; S. Rossi (CGI) for Sforzellina; S. Alberti (SGL) for Caspoggio; S. Borney (CGI) for Vaudaletta; S. Cerise (CGI) for Lavacciu, Monciair, and Montandeyne; S. D'Adda (SGL) for Lupo; S. Ratti (SGL) for Val Viola Occ.; U. Guichardaz (CGI) for Montandeyne; U. Ferrari (CGI) for Rosim/Rosimferner, Zai di Dentro/Innerer Zay Ferner, Zai di Fuori/Äusserer Zay Ferner, Zai di Mezzo/Mittlerer Zay Ferner, and Vedretta di Solda; V. Bertoglio (CGI) for Coupe de Money, Dzasset, Grand Croux Centr., Grand Etret, Lauson, Lavacciu, Moncorve, Money, and Tribolazione; V. Paneri (SGL) for Scerscen Inferiore; W. Monterin (CGI) for Indren Occ., Lys, and Piode.

Reconstructed frontal variation series for Pré de Bar was reported by P. Imhof (GIUB) based on Imhof (2010) and Imhof et al. (2012).

Reported investigators of glacier mass balances are G.L. Franchi, G.C. Rossi (GCI), and UI/HA for Malavalle/Übeltalferner and Pendente/Hangenderferner; M. Meneghel and L. Carturan (SAT) for Caresèr (Occidentale, Centrale, and Orientale); L. Mercalli, D. Cat Berro, and F. Fornengo (SMI) for Ciardoney; V. Bertoglio, and S. Cerise (CGI) for Grand Etret; M. Pecci, P. D'Aquila, and S. Pignotti (IMONT) for Calderone; R. Prinz, S. Galos (IMGI, UI/HA) for Vedretta Lunga/Langenferner; R. Dinale and A. Di Lullo (UI/HA) for Fontana Bianca and Vedretta Occ. di Ries/Westl. Rieserferner.

Selected recent publications are Pecci et al. (2008), Bocchiola and Diolaiuti (2009), Carturan et al. (2009), Citterio et al. (2009), and Knoll and Kerschner (2010).

## 2.19 Japan (JP)

Data were submitted by K. Fujita (DHAS).

Reported investigator for mass balance is K. Fujita (DHAS) for Hamaguri Yuki.

The mass balance series of Hamaguri Yuki glacieret was re-analyzed by K. Fujita (DHAS) and A. Ohmura (IAC). More details are found in Chapter 4.1 (Index Measurements), and the revised data series are given in Tables B and BB.



## **2.20 Kenya (KE)**

Data and information were submitted by R. Prinz (IMGI).

Reported investigator for glacier front variation is R. Prinz (IMGI) for Lewis.

Reported investigators for glacier mass balances are R. Prinz, L. Nicholson, and G. Kaser (IMGI).

As part of a broader glaciological-climatological research project funded by the Austrian Science Fund (FWF, grant P21288-N21), the Lewis Glacier monitoring program was revived in 2010, to continue the comprehensive glaciological studies on Mount Kenya of Stefan Hastenrath (UWAOS) and colleagues, which were abandoned in 1996 (direct measurements) and 2004 (mapping). The glacier outline and surface topography were mapped in March 2010 using a differential global positioning system (GPS) and ice thickness was measured using ground-penetrating radar. Mean mass balance rates in decadal intervals were derived from seven historical maps (1934–2004) using a geodetic approach (Prinz et al. 2011).

## **2.21 Mexico (MX)**

H. Delgado-Granados (UNAM) reported that there are no current in-situ observations.

A selected recent publication is Andrés et al. (2007).

## **2.22 Nepal (NP)**

Data were submitted by S. Bajracharya, S. Joshi, and D. Stumm (ICIMOD), T. Bolch (DUT/GIUZ), and K. Fujita (DHAS).

Reported investigators of glacier mass balances are S. Joshi, P. Maskey, and P. Mool (ICIMOD) for Thulagi, Tsho Rolpa, and Imja.

Information on geodetic glacier changes for AX010, Rikha Samba, and Yala are based mainly on Fujita and Nuimura (2011); for Ama Dablam, Amphu Laptse, Changri Nup/Shar, Chukhung, Duwo, Khumbu, Lhotse, Lhotse Nup, Lhotse Shar/Imja, and Nuptse on Bolch et al. (2008, 2011)

## **2.23 New Zealand (NZ)**

Data and information were submitted by B. Anderson (ARC) with contributions by T.J. Chinn (APPC).

Reported investigators of glacier front variations are T.J. Chinn (APPC) for Adams, Almer/Salisbury, Andy, Ashburton, Axius, Balfour, Butler, Cameron, Classen, Colin Campell, Crow, Dart, Dispute, Donne, Douglas (Kar.), Evans, Fitzgerald, Fox, Freshfield, Godley, Grey and Maud, Gunn, Hooker, Horace Walker, Ivory, Kahutea, La Perouse, Lambert, Lawrence, Leeb-Lornty, Lyell, Marion, Marmaduke Dixon, Mathias, Mueller, Murchison, Park Pass, Ramsay, Reischek, Sale, Siege, Snow White, Snowball, South Cameron, St. James, Strauchon, Tasman, Tewaewae, Thurneyson, Victoria, Whataroa, Whitbourne, White, Whymper, Wilkinson and Zora; B. Anderson (ARC) for Franz Josef and Brewster; H. Purdie (DGUC) for Fox; T. Kerr (NIWA) for Rolleston.

Reconstructed frontal variation series for Franz Josef was reported by P. Leclercq (IMAU) based on Leclercq (2012), McKinzey et al. (2004) and Fitzharris, B. (personal communication).

Reported principle investigators of glacier mass balances are B. Anderson (ARC), N.J. Cullen (DGUO-NZ) and D. Stumm (DGUO-NZ, UZIG) for Brewster; T. Kerr (NIWA) for Rolleston.

Qualitative glacier front variations are given in Table B. The assessments have been made from oblique aerial photographs taken on annual light aircraft flights made at about 3,000 m a.s.l. for annual end-of-summer snowline (EOSS) surveys on a set of 50 selected glaciers. The full EOSS data series 1977–2005 was given in FoG Vol. IX (WGMS 2008) and the 2005–2010 data are in Chapter 4 ‘Index Measurements and Special Events’ of the present volume. Full details on these observations are published in Chinn (1996) and Chinn et al. (2005).

Over the survey period (2005–2010), mass balance at Brewster Glacier was negative overall (c. -2.0 m w.e.) with very negative years in 2007/08 and 2009/10, but there were positive years in 2005/06 and 2006/07. The EOSS record shows a similar but not identical pattern (cf. also Stumm 2011), with high snowlines in 2005/06, 2007/08 and 2008/09 and near-neutral conditions in 2006/07 and 2009/10.

Positive mass balances during certain years in the last few decades led to glacier advance, but this advance is now over. For example Franz Josef reached its maximum length during the most recent phase of the advance in 2008 and has been steadily retreating and thinning since then. Proglacial lake growth has continued on many of the large debris-covered glaciers, each with its own characteristic behavior. Tasman Glacier, the largest in New Zealand, has shown an increase in calving velocity since 2006 (Dykes et al. 2011) as the glacier retreats into deeper water.

Current work on New Zealand glaciers is concentrated on direct mass balance measurements, monitoring changes in glacier size by remote sensing, and GPS measurements and glacier modeling. In 2004, a new mass balance monitoring program was started with on-site support by the WGMS on Brewster Glacier (Anderson et al. 2010; Gillet and Cullen 2011). Recent publications related to glacier fluctuations in New Zealand have increased in number and diversity, ranging from direct measurements of accumulation and ablation (Anderson et al. 2006; Purdie et al. 2008, 2011b, 2011a), remote sensing of glacier size (Quincey and Glasser 2009, Dykes et al. 2011, Gjermundsen et al. 2011) and velocity (Quincey and Glasser 2009, Herman et al. 2011).

## **2.24 Norway (NO)**

Data submission was coordinated by J.O. Hagen (DGUO-NO) with contributions by B. Gadek (SUP), H. Elvehøy (NVE), B. Kjøllmoen (NVE), J. Kohler (NPI), and I. Sobota (NCU).

Reported investigators for glacier front variations are L. Kolondra (SUP), J. Jania (SUP) and A. Adamek (WUT) for Hansbreen; A. Nesje (DES) for Midtdalsbreen; B. Kjøllmoen

and J.E. Haugsberg (NVE) for Langfjordjøkelen; B. Øyre (SUNK) for Blomstølskardsbreen and Svelgjabreen; C. Nyheim and F. Hansen (NVE) for Koppangsbreen and Steindalsbreen; E. Briksdal (NVE) for Bødalsbreen and Briksdalsbreen; G. Knutsen (STAK, NVE) for Bondhusbrea, Botnabrea, Breidablikkbrea, and Gråfjellsbrea; H. Elvehøy (STAK, NVE) for Engabreen, Leirbreen, Rembesdalskkåka, and Stegaholtbreen; H. Berg (NVE) for Sydbreen; I. Sobota (NCU) for Irenebreen and Waldemarbreen; J.-K. Sommerset (NVE) for Storsteinsfjellbreen; K.-H. Nessengmo (NVE) for Austre Okstindbreen and Corneliussenbreen; K. Åsen (NVE) for Bergsetbreen, Fåbergtølsbreen, Stegholtbreen, and Tuftebreen; L. Vedaa, T. Boee, and T. Snøtun (NBF) for Bøyabreen and Store Supphellebreen; L.M. Andreassen (NVE) for Bøverbreen, Hellstugubreen, Leirbreen, Storbreen, and Storjuvbreen; M.B. Buer (NVE) for Buerbreen; M. Jackson (NVE) for Langfjordjøkelen and Stegaholtbreen; N. Haakensen (NVE) for Hellstugubreen, Leirbreen, Nigardsbreen, and Styggedalsbreen; O.M. Tønsberg (STAK, NVE) for Breidablikkbrea, Gråfjellsbrea, and Langfjordjøkelen; P. Solnes (NVE) for Austerdalsbreen; S. Åsen (NVE) for Tuftebreen; S. Winkler (IGUW) for Bødalsbreen, Bøverbreen, Brennalsbreen, Kjenndalsbreen, and Storjuvbreen; S. Villmones (STAK) for Rembesdalskkåka; T. Klock (NVE) for Trollkyrkjebreen; P. Leclercq (IMAU) based on Lavrentiev (2008) for Aldegondabreen and Tavlebreen.

Reconstructed frontal variation series for Bergsetbreen, Bøyabreen, Bondhusbrea, Buerbreen, Lodalsbreen, and Nigardsbreen were reported by S.U. Nussbaumer (GIUZ) based on Nussbaumer et al. (2011).

Reported investigators for glacier mass balances are B. Kjøllmoen (NVE) for Ålfotbreen, Blomstølskardsbreen, Breidablikkbrea, Gråfjellsbrea, Hansebreen, Langfjordjøkelen, Nigardsbreen, and Svelgjabreen; H. Elvehøy (NVE) for Austdalsbreen, Engabreen, and Rembesdalskkåka; L.M. Andreassen (NVE) for Gråsubreen, Hellstugubreen, and Storbreen; J. Kohler (NPI) for Austre Brøggerbreen, Kongsvegen, and Midtre Lovénbreen; R. Engeset (NVE) for Ålfotbreen, Austdalsbreen, Breidablikkbrea, Engabreen, Gråfjellsbrea, Gråsubreen, Hansebreen, Hardangerjøkulen, Hellstugubreen, Langfjordjøkelen, Nigardsbreen, Rundvassbreen, Storbreen, and Storglombreen; P. Glowacki and D. Puczek (PAS) for Hansbreen; and I. Sobota (NCU) for Elisebreen, Irenebreen, and Waldemarbreen.

Information on geodetic glacier changes for Åsgårdfonna Ice Cap, Abrahamsenbreen, Aldousbreen, Balderfonna Ice Cap, Barentsjøkulen, Bodleybreen, Borebreen, Chydeniusbreen, Digerfonna Ice Cap, Edgeøeyjøkulen, Franklinbreen N+S, Frazerbreen, Glimleebreen, Hinlopenbreen, Hochstetterbreen, Holmstrømbreen, Idunbreen, Isachsenfonna, Kongsvegen, Kronebreen, Maudbreen, Negribreen, Osbornebreen, Rijpbreen, Sabinebreen, Storskavlen Ice Cap, Svalbreen, Sveabreen, and Tunabreen are based mainly on Nuth et al. (2010); for Midtre Lovénbreen on Kohler et al. (2007), Cogley (2009), and Barrand et al. (2010).

In 2012, H. Elvehøy (NVE) checked, revised and updated the entire front variation dataset available at the WGMS. The data for the observation period 2005–2010 is published in Table D of the present volume; earlier data can be ordered digitally from NVE and the WGMS. For the glaciological mass balance series of Engabreen, large deviations from the geodetic mass balances have been found (cf. Haug et al. 2009).

The results of the glacier investigations carried out by NVE are published in their annual reports (e.g. Kjølmoen et al. 2007, 2008, 2009). Selected recent publications related to Norwegian glacier fluctuations are from Grabiec et al. (2006, 2011), Migala et al. (2006), Glowacki (2007), Andreassen et al. (2008, 2009), Nesje et al. (2008), Baumann et al. (2009), Blaszczyk et al. (2009), Elvehøy et al. (2009), Giesen et al. (2009), Paul and Andreassen (2009), Winkler et al. (2009), Oerlemans et al. (2011), and Sobota (2011).

## **2.25 Pakistan (PK)**

Information about glacier-related research was submitted by A. Ghazanfar (GCISC).

Currently no continuous glacier front variation or mass balance studies are carried out by institutions in Pakistan. In the past, a few studies were conducted: In a first phase (1985–1989), WAPDA carried out mass balance studies on selected glaciers of Karakoram jointly with Canadian universities and the Snow and Ice Hydrology Project (SIHP). In the second phase of the SIHP, WAPDA installed 20 high-altitude automatic data collection platforms in the elevation zone of 2,200 to 5,000 m a.s.l. The hourly/daily data including temperature (max-min), relative humidity, precipitation, wind gust, wind speed are available from the Hydrological Research Directorate of WAPDA. In collaboration with ICIMOD, WRRI prepared an inventory of glaciers and glacial lakes for the identification of potentially hazardous glacial lakes in the Hindu Kush Himalaya region of Pakistan using Landsat ETM+ data supplemented with topographic maps (ICIMOD 2007). GCISC measured temporal changes in the lateral dimensions of Biafo, Barpu, Bualtar, Mohmil, Mulangatti, Passu, Gulkin and Gulmit using Landsat images of 30 m spatial resolution for various years. PMD measured debris depth in the ablation zone of Baltoro glacier during July and August 2011 using ground-penetrating radar.

## **2.26 Peru (PE)**

Data submission was coordinated by C.A. Portocarrero Rodríguez (INRENA) with contributions by J. Gómez (INRENA).

Reported investigators of glacier front variations are J. Gómez and A. Cochachin (INRENA) for Incachiriasca and Alpamayo; J. Gómez, A. Cochachin, and M. Zapata (INRENA) for Artesonraju, Gajap-Yanacarco, Pastoruri, Shallap, Uruashraju, and Yanamarey; J. Gómez, A. Cochachin, R. Gallaire, and M. Zapata (INRENA) for Shullcon.

Reported investigators of glacier mass balances are J. Gómez and L. Davila (INRENA) for Artesonraju and Yanamarey.

Information on geodetic glacier changes for Coropuna is based mainly on Peduzzi et al. (2010).

## **2.27 Poland (PL)**

Data and information of the glacierets in the Tatra Mountains were submitted by B. Gadek (SUP).

Reported investigators of glacierets in the Tatra Mountains are Z. Kijkowska-Wisłinska, M. Wisłinski and A. Wisłinski (MPG) for Pod Cubryna and Pod Bula.

Recent related publications are from Gadek (2008, 2011) and Adamowski and Wislinski (2010).

### **2.28 Slovenia (SI)**

Data from Triglav glacieret were submitted by M. Gabrovec (ZRC-SAZU).

A recent related publication is from Gabrovec (2008).

### **2.29 Spain (ES)**

Data submission was coordinated by M. Arenillas (I75SA), E. Martinez de Pisón (UAM), and F. Pastor (MMA).

Reported investigator of glacier front variations is G. Cobos Campos (UPV) for Ane-to, Barrancs, Clot De Hount, Coronas, Infierno E, Infierno W, La Paul, Las Frondellas, Llardana, Los Gemelos, Maladeta, Marborecilindro, Perdido Inf., Perdido Sup, Posets, Punta Zarra, and Tempestades.

Reported investigators of glacier mass balances are A. Pedrero Muñoz, M. Arenillas (I75SA), and G. Cobos Campos (UPV) for Maladeta.

### **2.30 Sweden (SE)**

Data submission was coordinated by P. Holmlund (INK) with contributions by P. Jansson (INK).

Reported investigators of glacier front variations are A. Mercer (INK) for Mikkajekna, Partejekna, Ruopsokjekna, Ruotesjekna, Salajekna, Storglaciären, and Suottasjekna; P. Holmlund (INK) for Isfallsglaciären, Karsojietna, Mikkajekna, Passusjietna E., Rabots glaciär, Riukojietna, Storglaciären, and Vartasjekna; P. Holmlund and H. Grudd (INK) for Sydöstra Kaskasatjåkkaglaciären.

Reported investigators for glacier mass balances are P. Holmlund and P. Jansson (INK) for Mårmaglaciären, Rabots glaciär, Riukojietna, Storglaciären, and Tarfalaglaciären.

Multi-temporal aerial images of Storglaciären (1959-69-80-90-99) were re-analyzed and new geodetic changes calculated by Koblet et al. (2010). Based on the latter study, Zemp et al. (2010) checked the glaciological mass balance series including a detailed assessment of related uncertainties.

### **2.31 Switzerland (CH)**

Data and information were submitted by M. Hoelzle (DGUF).

The program of front variation observations is largely supported by the CC (Cryospheric Commission of the Swiss Academy of Sciences) and operated by the VAW, in collaboration with many Cantonal Forestry Services, hydroelectric power companies, private persons and universities. The individual observers and their sponsoring agencies involved in this program are: VAW – A. Bauder (Gries, Silvretta, Rhône, Giétro, Corbassière, Grosser Aletsch, Findelen, Trift (Gadmen)); VAW – H. Bösch (Schwarzberg,

Allalin, Kessjen, Seewjinen); Forestry Service of Canton Valais – U. Andenmatten (Fee), L. Jörgen (Gorner), M. Schmidhalter (Kaltwasser), F. Pfammatter (Rossboden), H. Henzen (Lang), M. Barmaz (Zinal, Moiry), J. Medico (Valsorey, Tseudet, Boveyre, Saleina), O. Bourdin (Cheillon, En Darrey), F. Vouillamoz (Grand Désert, Mt. Fort), J.D. Brodard (Tsanfleuron), F. Pralong (Ferpècle, Mt. Miné, Arolla, Tsidjiore Nouve); Forestry Service of Canton Vaud – J. Binggeli (Sex Rouge, Prapio), J.P. Marlètaz (Paneyrosse, Grand Plan Nèvé); Forestry Service of Canton Bern – R. Straub (Gauli, Stein, Steinlimmi), C. von Grünigen (Lämmern), E. Coleman Brantschen (Schwarz), R. Descloux (Gamchi), U. Fuhrer (Alpetli, Blümlisalp), R. Zumstein (Eiger, Tschingel); Forestry Service of Canton Glarus – J. Walcher (Sulz); Forestry Service of Canton Obwalden – S. Flury (Firnelpeli, Griessen); Forestry Service of Canton St. Gallen – A. Hartmann (Pizol), T. Brandes (Sardona); Forestry Service of Canton Graubünden – C. Barandun (Porchabella), G. Berchier (Palü, Paradisino, Cambrena), J. Brunold (Vorab), C. Fisler (Paradies, Suretta), M. Frei (Punteglias), C. Mengelt (Forno), G. Bott (Calderas, Roseg, Tschierva, Morteratsch, Tiatsch), B. Riedi (Lenta), G.-C. Feuerstein (Sesvenna, Lischana), R. Lutz (Lavaz), M. Maikoff (Verstankla); Forestry Service of Canton Ticino – C. Vallenggia (Basòdino, Val Torta, Cavagnoli, Corno, Crosolina, Bresciana, Valleggia); Forestry Service of Canton Uri – M. Planzer (Kehlen, Rotfirn), P. Kläger (Wallenbur), B. Annen (Griess), J. Marx (Brunni, Damma, Tiefen, St. Anna), A. Arnold (Hüfi); private investigators – Flotron AG (Oberaar, Unteraar), J.L. Chabloz (Otemma, Mt. Durand, Breney), H. Boss jun. (Oberer Grindelwald, Unterer Grindelwald), E. Hodel (Ammerten), J. Ehinger (Trient), H.P. Klausner (Biferten, Glärnisch), U. Steinegger (Limmern, Plattalva), A. Wipf (Dungel, Gelten), P. Aschilier (Fiescher), P. Rovina (Ried), B. Teufen (Scaletta), U. Wittdorf (Mutt), C. Theler (Oberaletsch). Glaciers of the front variation program that were not observed during the observation period are Bella Tola, Brunegg, Mittelaletsch, Moming, Rätzli, Turtmann and Zmutt.

Reconstructed frontal variation series for Unterer Grindelwald, Oberer Grindelwald, Rhône, Rosenlaui, and Unteraar were reported by H.J. Zumbühl (GIUB) based on Zumbühl (1980), Zumbühl et al. (1983), Zumbühl and Holzhauser (1988), and Zumbühl et al. (2008).

The investigators and their sponsoring agencies of glaciers with mass balance series are as follows: A. Bauder and M. Funk (VAW) for Gries and Silvretta; G. Kappenberger (G.K.) and G. Casartelli (G.C.) for Basòdino; A. Linsbauer (GIUZ), H. Machguth (GIUZ) and N. Salzmann (GIUZ/DGUF) for Findelen and M. Huss (DGUF) for Pizol.

The most recent Swiss glacier monitoring data are published in Bauder and Rüegg (2009) and Bauder and Ryser (2011). All data and information on Swiss Cryospheric Monitoring can be found on [www.cryosphere.ch](http://www.cryosphere.ch) for the front variations or directly at <http://glaciology.ethz.ch/swiss-glaciers>. Note that Swiss glacier monitoring observes several additional variables in comparison to international monitoring. The monitoring of englacial temperatures (Bauder and Rüegg 2009) is probably the most important as well as exceptional one (Hoelzle et al. 2011). The current monitoring program in Switzerland is described in Bauder and Rüegg (2009).

Since the publication of the last FoG (Vol. IX, 2000–2005), Findelengletscher has now a

measurement series of six years and efforts are currently underway to produce geodetic calibration within several individual research projects. In addition, a new mass balance series was started on Pizol Gletscher (Huss 2010). For Gries and Silvretta, mass balance series were homogenized by Huss et al. (2009a) and are given in Tables C, CC and CCC. Differences between geodetic ice volume changes (Bauder et al. 2007) and the direct glaciological method were corrected. Subtraction of two digital elevation models acquired in February 2000 and around 1985 provide geodetic volume changes for most Swiss glaciers over the 1985–1999 period (Paul and Haeberli 2008). It was confirmed in this study that the mean of the cumulative mass changes from all measured glaciers in the Alps provide indeed a good approximation of the mass changes for all Swiss glaciers.

Analyses of satellite data indicate a continuation of the mass and area loss also from large glaciers, with lakes appearing in several glacier forefields (Paul et al. 2007, Frey et al. 2010). Automated glacier mapping using multispectral satellite data (Paul and Hendriks 2010, Seiz et al. 2011) has been used in combination with digital elevation models to create a new glacier inventory for the entire European Alps including all Swiss glaciers (Paul et al. 2011). Thus, complete inventory information for Switzerland is now available for the years 1850, 1973, 1998/1999 and 2003. The new dataset was already used to evaluate different extrapolation schemes for mass balance as measured in the field for the entire Alps (Huss 2012).

Several new estimates of the total ice volume of the Swiss glaciers are available. Farinotti et al. (2009a) estimated the total Swiss glacier ice volume using an approach called ITEM based on the principles of ice flow mechanics (Farinotti et al. 2009b) and direct ice thickness observations for about 20 Swiss glaciers for the year 1999 as  $74 \pm 9 \text{ km}^3$ , which is similar to the previous estimates of Müller et al. (1976) and Maisch et al. (2000) for the year 1973 with  $67 \text{ km}^3$  and  $74 \text{ km}^3$ , respectively. Linsbauer et al. (2012) calculated a total volume with another approach called GlabTop as  $72\text{--}79 \text{ km}^3$  for 1973 and  $61\text{--}68 \text{ km}^3$  for 1999. Hence, an uncertainty range of about 20 to 30% exist for the estimated values.

### **2.32 TURKEY (TR)**

Data and frontal variations for Erciyes were submitted by P. Leclercq (IMAU) based on Sarıkaya et al. (2009).

### **2.33 U.S.A. (US)**

Data and information were submitted by W. Bidlake (USGS-T).

Reported investigators of glacier fronts are M. Pelto (NCD) for Boulder, Columbia (2057), Daniels, Deming, Easton, Foss, Ice Worm, Lower Curtis, Lynch, Rainbow, Watson and Yawning; W. Bidlake (USGS-T) for South Cascade; P. Leclercq (IMAU) based on Barclay et al. (2009), Kienholz (2010), Le Bris et al. (2011), Leclercq (2012) and Weeks (2011) for Bear, Dinglestadt, Excelsior, Exit, Grewingk, McCarty, Northwestern, Nuka, Okpilak, Tebenkof, Valdez, Wolverine, and Yalik.

Reported investigators of glacier mass balances are R. March and S. O’Neel (USGS-F) for Wolverine and Gulkana; J. Riedel (NPNC) for Emmons, Nisqually, Noisy Creek, North Klawatti, Sandalee and Silver; M. Pelto (NCD) for Columbia (2057), Daniels, Easton, Foss, Ice Worm, Lower Curtis, Lynch, Rainbow, Sholes and Yawning; M. Pelto (JIRP) for

Lemon Creek, Taku; W. Bidlake (USGS-T) for South Cascade.

Information on geodetic glacier changes for Barnard, Bering, Guyot North and South Branch, Hidden, Hubbard, Klutlan, Logan, Malaspina, Novatak, Steller, Tana, Walsh, West Nunatak, Yahtse, and Yakutat are based mainly on Arendt et al. (2008).

Selected recent publications related to glacier fluctuations in the U.S.A. are from Anslow, et al. (2008), Harrison et al. (2009), Pelto (2009), Rasmussen (2009), Bidlake et al. (2010), Van Beusekom et al. (2010), and March and O'Neel (2011).



## CHAPTER 3 SPONSORING AGENCIES AND NATIONAL CORRESPONDENTS FOR THE GLACIER FLUCTUATIONS

### 3.1 General Remarks

The information about sponsoring agencies and sources of data for the various countries were supplied by NCs of the WGMS and individual glaciological workers. For operational and efficiency reasons, the number of correspondents per country must be limited to one person. The main tasks of the NCs are to nationally (i) coordinate and represent all institutions and groups involved in glacier monitoring within the WGMS network, (ii) be the central communication node for the WGMS staff, (iii) be responsible for the annual data collections and submission to the WGMS.

The succession plan for the position of the NCs includes the following steps:

- In countries with existent NCs, they are asked to initiate the procedure for the naming of their successor in a timely manner.
- Glaciological groups in each country are encouraged to jointly nominate a (new) candidate for the position of WGMS NC.
- The Director of the WGMS accepts the nomination from within a country and confirms the naming of the (new) NC by an official letter.

### 3.2 Sponsoring Agencies and Sources of Data for the Various Countries (for observation periods 2005/06 to 2009/10)

#### Antarctica (AQ)

IAA-DNA                      see IAA-DNA – Argentina (AR)

UPM                            see UPM – Spain (SP)

#### Argentina (AR)

CICTERRA                      Centro de Investigaciones en Ciencias de la Tierra (CICTERRA)  
Facultad de Ciencias Exactas  
Físicas y Naturales - UNC  
Av. Vélez Sarsfield 1611  
X5016GCA Córdoba – Argentina

DGRH                            Dirección General de Recursos Hídricos  
Secretaría de Desarrollo sustentable y Ambiente  
Gobierno de Tierra del Fuego  
San Martín 1401  
9410 Ushuaia – Argentina  
Tierra del Fuego

|                     |  |
|---------------------|--|
| DNA-UNC             | <p>Convenio DNA – UNC<br/> Departamento de Geología Básica<br/> Facultad de Ciencias Exactas Físicas y Naturales<br/> Universidad Nacional de Córdoba<br/> Avda. Vélez Sarsfield 1611<br/> X5016 GCA Córdoba – Argentina</p> |
| IAA-DNA             | <p>Instituto Antártico Argentino – Dirección Nacional del Antártico<br/> Cerrito 1248<br/> 1010 Buenos Aires – Argentina</p>   |
| IANIGLA             | <p>Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales<br/> CONICET<br/> Casilla de Correo 330<br/> 5500 Mendoza – Argentina</p>  |
| UNTDF               | <p>Universidad Nacional de Tierra del Fuego<br/> Onas 450<br/> 9410 Ushuaia – Argentina<br/> Tierra del Fuego</p>  |
| <b>Austria (AT)</b> |  |
| CGGBAS              | <p>see CGGBAS – Germany</p>  |
| DGGS                | <p>Department of Geography and Geology<br/> University of Salzburg<br/> Hellbrunnerstrasse 34 / III<br/> 5020 Salzburg – Austria</p>   |
| IMGI                | <p>Institute for Meteorology and Geophysics<br/> University of Innsbruck<br/> Innrain 52<br/> 6020 Innsbruck – Austria</p>   |
| OEAV                | <p>Österreichischer Alpenverein (Austrian Alpine Club)<br/> Wilhelm Greil Strasse 15<br/> 6020 Innsbruck – Austria</p>   |
| ZAMG                | <p>Zentralanstalt für Meteorologie und Geodynamik<br/> Hohe Warte 38<br/> 1190 Vienna – Austria</p>  |

## **Bolivia (BO)**

|         |  |
|---------|--|
| CNRS    | see CNRS – France  |
| IHH     | Instituto de Hidráulica e Hidrología<br>Universidad Mayor de San Andrés<br>Calle 30, Cota-Cota – P.O. Box 699<br>La Paz – Bolivia  |
| IGEMA   | Instituto de Investigaciones Geológicas y del Medio Ambiente<br>Carrera de Ingeniería Geológica<br>Universidad Mayor de San Andrés<br>Calle 27, Cota Cota – P.O. 35140<br>La Paz – Bolivia |
| IRD     | see IRD – France   |
| SENAMHI | Servicio Nacional de Meteorología e Hidrología<br>P.O. Box 10993<br>La Paz – Bolivia   |

## **C.I.S. (SU)**

|             |  |
|-------------|--|
| IGNANKaz    | Institute of Geography<br>National Academy of Sciences of the Kazakh Republic<br>Pushkin Str. 99<br>480100 Almaty – Kazakhstan |
| IGRAN       | Institute of Geography<br>Russian Academy of Sciences<br>Staromonetny, 29<br>119017 Moscow – Russia                            |
| MGU         | Moscow State University<br>Geographical Faculty<br>Leninskiye Gory<br>119992 Moscow – Russia                                   |
| TGU         | Tomsk State University<br>Laboratory of Glacioclimatology<br>Lenin Str., 36<br>634050 Tomsk – Russia                           |
| UZ-HydroMet | The Center of Hydrometeorological Service (UzHydromet)<br>72, K.Makhsumov str.<br>100052 Tashkent – Uzbekistan                 |

## **Canada (CA)**

- GSC                      Natural Resources Canada  
Geological Survey of Canada  
Terrain Sciences Division  
601 Booth Street  
Ottawa, ON, K1A 0E8 – Canada
- TU/G                     Trent University  
Geography Department  
P.O. Box 4800  
Peterborough, ON, K9J 7B8 – Canada
- UNBC                   University of Northern British Columbia  
3333 University Way  
Prince George, BC V8G 0B9 – Canada

## **Chile (CL)**

- CECS                   Centro de Estudios Científicos  
Avda. Prat 514  
Valdivia – Chile
- DGA                    Dirección General de Aguas  
Morandé 59  
Santiago – Chile

## **China (CN)**

- CAREERI               Cold and Arid Regions Environment and Engineering Research Institute  
Chinese Academy of Sciences (CAS)  
260 West Donggang Road  
730 000 Lanzhou – P. R. China

## **Colombia (CO)**

- IDEAM                   Instituto de Hidrología, Meteorología y Estudios Ambientales  
Subdirección de Geomorfología y Suelos  
Diagonal 97 No. 17–60, Piso 3  
Bogotá – Colombia
- INGEOMINAS           Instituto Colombiano de Geología y Minería  
Observatorio Vulcanológico y Sismológico de Manizales  
Grupo de Glaciología  
Av. 12 de Octubre No. 15–47  
Manizales – Colombia

## **Ecuador (EC)**

INAMHI                    Instituto Nacional de Meteorología y Hidrología  
P.O. Box  
16 310 Quito – Ecuador

IRD                        see IRD – France

CNRS                    see CNRS – France

## **France (FR)**

AM                        Association Moraine  
Village  
31110 Poubeau – France

CEMAGREF            Snow Division – ETNA  
Ministry of Agriculture  
Domaine Universitaire, BP 76  
38402 Saint Martin d'Hères, Cedex – France

CNRS                    Laboratory of Glaciology and Environmental Geophysics (LGGE)  
Domaine Universitaire, BP 96  
38402 Saint Martin d'Hères, Cedex – France

IRD                        Institut de Recherche pour le Développement  
P.O. Box 96  
38402 St-Martin d'Hères, Cedex – France

## **Germany (DE)**

CGGBAS                Commission for Geodesy and Glaciology  
Bavarian Academy of Sciences  
Alfons-Goppel-Str.11  
80539 Munich – Germany

DUT                        Technische Universität Dresden  
Institut für Geographie  
01062 Dresden – Germany

IGUW                    Institut für Geographie  
Universität Würzburg  
Am Hubland  
97074 Würzburg – Germany

LMU                      Ludwig-Maximilians-Universität  
Department für Geographie  
Luisenstrasse 37  
80333 München – Germany

### **Greenland (GL)**

CPM-LA                see CPM-LA – U.S.A

DESA                   Department of Earth Science  
Ny Munkegarde Bg. 1520  
8000 Århus – Denmark

DGGC                   Department of Geography and Geology  
University of Copenhagen  
Øster Voldgade 10  
1350 Copenhagen K – Denmark

GEUS                   The Geological Survey of Denmark and Greenland (GEUS)  
Øster Voldgade 10  
1350 Copenhagen K – Denmark

ZAMG                   See ZAMG – Austria

### **Iceland (IS)**

IES                      Institute of Earth Sciences  
University of Iceland  
Sturlugata 7, Askja  
101 Reykjavík – Iceland

IGS                      Iceland Glaciological Society  
National Energy Authority  
Grensásvegi 9  
108 Reykjavík – Iceland

IMO                      Icelandic Meteorological Office  
Grensásvegi 9  
108 Reykjavík – Iceland

ISOR                    Iceland GeoSurvey (ÍSOR)  
Grensásvegur 9  
108 Reykjavík – Iceland

NEA                      National Energy Authority  
Hydrological Service  
Orkustofnun  
Grensasvegi 9  
108 Reykjavík – Iceland

NPC                      National Power Company  
Háleitisbraut 68  
103 Reykjavík – Iceland

## **India (IN)**

CNRS                      see CNRS – France

GSI                      Glaciology Division  
Geological Survey of India  
Vasundara Complex, Sector E, Aliganj  
226024 Lucknow – India

SES                      School of Environmental Sciences  
Jawaharlal Nehru University  
New Dehli 110067 – India

## **Indonesia (ID)**

A.R.                      see National Correspondent for Australia

## **Iran (IR)**

WRI                      Water Research Institute  
Ministry of Energy  
Shahied Abbaspour Blvd.  
East Vafadar Blvd., 4<sup>th</sup> Tahranspars Sq.  
P.O. Box 16765-313  
Tehran – Iran

## **Italy (IT)**

CGI                      Comitato Glaciologico Italiano  
Via Valperga Caluso 35  
10125 Torino – Italy

|                   |  |
|-------------------|--|
| DST-UPi           | Dipartimento di Scienze della Terra<br>Università di Pisa<br>Via S. Maria 53<br>56126 Pisa – Italy   |
| G.C.              | Giacomo Casartelli<br>22032 Albese – Italy   |
| GIUB              | See GIUB – Switzerland   |
| IMGI              | See IMGI – Austria   |
| IMONT             | Italian Mountain Institute<br>Piazza dei Caprettari 70<br>00186 Roma – Italy   |
| SAT               | Società degli Alpinisti Tridentini<br>Comitato Glaciologico Trentino<br>via Mancì, 57<br>38100 Trento – Italy  |
| SGAA              | Servizio Glaciologico Alto Adige   |
| SGL               | Servizio Glaciologico Lombardo<br>Via Alessandro Volta 22<br>20121 Milano – Italy  |
| SMI               | Società Meteorologica Italiana<br>Castello Borello<br>10053 Bussoleno (TO) – Italy   |
| UI/HA             | Ufficio Idrografico / Hydrographisches Amt<br>Provincia Autonoma di Bolzano - Alto Adige<br>Autonome Provinz Bozen - Südtirol<br>via Mendola / Mendelstrasse 33<br>39100 Bolzano / Bozen – Italy |
| <b>Japan (JP)</b> |  |
| DHAS              | Department of Hydrospheric-Atmospheric Sciences<br>Graduate School of Environmental Studies<br>Hydrospheric Atmospheric Research Center, Nagoya University<br>464 8601 Nagoya – Japan            |
| IAC               | See IAC – Switzerland  |



## **Kenya (KE)**

- IMGI                      see IMGI – Austria
- UWAOS                  see UWAOS – U.S.A.

## **Mexico (MX)**

- UNAM                   Instituto de Geofísica  
Universidad Nacional Autónoma de Mexico  
Circuito Científico  
Coyoacan 04510 D.F. – Mexico

## **Nepal (NP)**

- DHAS                   see DHAS – Japan
- DUT                     see DUT – Germany
- GIUZ                    see GIUZ – Switzerland
- ICIMOD                International Centre for Integrated Mountain Development  
P.O. Box 3226  
Khumaltar  
Kathmandu – Nepal

## **Netherlands (NL)**

- IMAU                   Institute for Marine and Atmospheric research Utrecht  
Utrecht University  
Princetonplein 5  
3584 CC Utrecht – The Netherlands

## **New Zealand (NZ)**

- APPC                   Alpine and Polar Processes Consultancy  
20 Muir Rd. Lake Hawea  
RD 2 Wanaka  
Otago 9382 – New Zealand
- ARC                     Antarctic Research Centre  
Victoria University of Wellington  
P.B. 600  
Wellington – New Zealand

|                    |  |
|--------------------|--|
| DGUC               | Department of Geography<br>University of Canterbury<br>P.B. 4800<br>Christchurch – New Zealand   |
| DGUO-NZ            | Department of Geography/Te Ihowhenua<br>University of Otago<br>P.B. 56<br>Dunedin – New Zealand  |
| NIWA               | National Institute of Water and Atmospheric Research Ltd<br>P.B. 6414<br>Dunedin – New Zealand   |
| <b>Norway (NO)</b> |  |
| DES                | Department of Earth Sciences<br>University of Bergen<br>Allégaten 41<br>5007 Bergen – Norway   |
| DGUO-NO            | Department of Geosciences<br>University of Oslo<br>P.O. Box 1047, Blindern<br>0316 Oslo – Norway   |
| IGUW               | see IGUW – Germany   |
| NBF                | Norsk Bremuseum<br>6848 Fjærland – Norway  |
| NCU                | see NCU – Poland   |
| NPI                | Norwegian Polar Institute<br>Polar Environmental Centre<br>9296 Tromsø – Norway  |
| NVE                | Norwegian Water Resources and Energy Administration<br>Hydrology Division – Glacier section<br>P.O. Box 5091 Majorstua<br>0301 Oslo – Norway |
| PAS                | see PAS – Poland   |
| STAK               | Statkraft<br>Lilleakerveien 6<br>0216 Oslo – Norway  |

SUNK                      Sunnhordland Kraftlag AS  
Postboks 24  
5401 Stord – Norway

SUP                      see SUP – Poland

WUT                      see WUT – Poland

### **Pakistan (PK)**

GCISC                      Global Change Impact Studies Center  
61/A, 1<sup>st</sup> Floor, Jinnah Avenue  
Islamabad – Pakistan

ICIMOD                      See ICIMOD – Nepal

PMD                      Pakistan Meteorological Department (PMD)  
Headquarters Office Sector H-8/2  
Islamabad – Pakistan

WAPDA                      Water and Power Development Authority of Pakistan  
WAPDA House  
Sharah-e-Quaid-e-Azam  
P.O. Box 9202211  
Lahore – Pakistan

WRI                      Water Resources Research Institute  
National Agricultural Research Center (NARC)  
Park Road  
Islamabad – Pakistan

### **Peru (PE)**

INRENA                      Unidad de Glaciología y Recursos Hídricos  
Av. Confraternidad Internacional Oeste No. 167  
Huaraz, Ancash – Peru

### **Poland (PL)**

MPG                      Little Geographical Workshop  
ul. Wschodnia 19/6  
20 015 Lublin – Poland

NCU Department of Cryology and Polar Research  
Institute of Geography  
Gagarina 9  
87 100 Torun – Poland

PAS Institute of Geophysics  
Polish Academy of Sciences  
ul. Ksiecia Janusza 64  
01 452 Warsaw – Poland

SUP Department of Geomorphology  
University of Silesia  
ul. Bedzinska 60  
41 200 Sosnowiec – Poland

WUP Warsaw University of Technology  
Plac Politechniki 1  
00 661 Warsaw – Poland

#### **Slovenia (SI)**

ZRC-SAZU Anton Melik Geographical Institute  
Slovenian Academy of Sciences and Arts  
Gosposka ulica 13  
1000 Ljubljana – Slovenia

#### **Spain (ES)**

I75SA Ingeniería 75, S.A.  
C/ Velázquez 87 - 4º Dcha  
28006 Madrid – Spain

MMA Dirección General del Agua  
Ministerio de Medio Ambiente  
Plaza de San Juan de la Cruz s/n.  
28071 Madrid – Spain

UAM Departamento de Geografía Física  
Universidad Autónoma  
Ciudad Universitaria de Cantoblanco  
28049 Madrid – Spain

UPM Departamento de Matemática Aplicada  
Universidad Politécnica de Madrid  
ETSI Telecomunicación  
Av. Complutense, 30  
28040 Madrid – Spain

UPV                      Departamento de Ingeniería del Terreno  
Universidad Politécnica de Valencia  
ETSI Caminos, Canales y Puertos  
Camino de Vera s/n  
46022 Valencia – Spain

**Sweden (SE)**

INK                      Department of Physical Geography and Quaternary Geology  
Glaciology Section  
University of Stockholm  
106 91 Stockholm – Sweden

**Switzerland (CH)**

CC                      Cryospheric Commission  
Swiss Academy of Sciences  
Schwarztorstrasse 9  
3007 Bern – Switzerland

DGUF                      Department of Geosciences  
University of Fribourg  
Chemin du Musée 4  
1700 Fribourg – Switzerland

G.C.                      see G.C. – Italy

G.K.                      Giovanni Kappenberger  
6654 Cavigliano – Switzerland

GIUB                      Institute of Geography  
University of Bern  
Hallerstrasse 12  
3012 Bern – Switzerland

GIUZ                      Department of Geography  
University of Zurich-Irchel  
Winterthurerstrasse 190  
8057 Zürich – Switzerland

IAC                      Institute for Atmospheric and Climate Science  
ETH Zurich  
Universitätsstrasse 16  
8092 Zürich – Switzerland

|                    |   |
|--------------------|---|
| SCNAT              | Glaciological Commission<br>Swiss Academy of Sciences<br>Schwarztorstr. 9<br>3007 Bern – Switzerland  |
| VAW                | Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW)<br>ETH Zurich<br>Gloriastr. 37/39<br>8092 Zürich – Switzerland                    |
| <b>U.S.A. (US)</b> |   |
| CPM-LA             | Climate, Ocean and Sea Ice Modeling Group<br>Computational Physics and Methods<br>Los Alamos National Laboratory<br>Los Alamos, NM 87545 – U.S.A. |
| JIRP               | Juneau Icefield Research Program<br>Nicols College<br>Dudley, MA 01571 – U.S.A.   |
| NCD                | Nichols College<br>124 Center Road<br>Dudley, MA 01571 – U.S.A.   |
| NPNC               | North Cascades National Park<br>Sandalee Marblemount Ranger Station<br>Silver 7280 Ranger Station Rd.<br>Marblemount, WA 98267 – U.S.A.           |
| USGS-F             | U.S. Geological Survey<br>Alaska Science Center, Glaciology<br>3400 Shell Street<br>Fairbanks, AK 99701 7245 – U.S.A.                             |
| USGS-T             | U.S. Geological Survey<br>Washington Water Science Center<br>934 Broadway, Suite 300<br>Tacoma, WA 98402 – U.S.A.                                 |
| UWAOS              | Department of Atmospheric and Oceanic Sciences<br>University of Wisconsin-Madison<br>1225 W. Dayton Street<br>Wisconsin, MA 53706 – U.S.A.        |

### 3.3 National Correspondents of WGMS for Glacier Fluctuations (as of 2012)

|  |   |
|--|---|
| ANTARCTICA                             | see ARGENTINA, AUSTRALIA, CHILE, ECUADOR, SPAIN   |
| ARGENTINA/<br>ANTARCTICA               | Lydia Espizua<br>Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales<br>CONICET (IANIGLA)<br>Casilla de Correo 330<br>5500 Mendoza – Argentina<br>lespizua@mendoza-conicet.gob.ar  |
| AUSTRALIA/<br>ANTARCTICA/<br>INDONESIA | Andrew Ruddell<br>4 Cust Street<br>Rainbow<br>3424 Victoria – Australia<br>andrewruddell@bigpond.com  |
| AUSTRIA                                | Andrea Fischer<br>Institut für Internationale Gebirgsforschung<br>Österreichische Akademie der Wissenschaften<br>Technikerstrasse 21<br>6020 Innsbruck – Austria<br>andrea.fischer@uibk.ac.at   |
| BOLIVIA                                | Alvaro Soruco<br>Instituto de Investigaciones Geológicas y<br>del Medio Ambiente - IGEMA<br>Carrera de Ingeniería Geológica -<br>Universidad Mayor de San Andres<br>Calle 27, Cota Cota - P.O. 35140<br>La Paz – Bolivia<br>Alvaro.Soruco@gmail.com |
| C.I.S.                                 | Victor V. Popovnin<br>Moscow State University<br>Geographical Faculty<br>Leninskiye Gory<br>119 992 Moscow – Russia<br>po@geogr.msu.ru<br>begemotina@hotmail.com  |
| CANADA                                 | Michael N. Demuth<br>Natural Resources Canada<br>Geological Survey of Canada<br>601 Booth Street<br>Ottawa, ON K1A 0E8 – Canada<br>mdemuth@NRCan.gc.ca  |

|                        |   |
|------------------------|---|
| CHILE/<br>ANTARCTICA   | Gino Casassa<br>Centro de Estudios Científicos<br>Av. Prat. 514<br>Valdivia – Chile<br>gcasassa@cecs.cl   |
| CHINA                  | Zhongqin Li<br>Tianshan Glaciological Station / Cold and Arid Regions<br>Environment and Engineering Research Institute (CAREERI)<br>Chinese Academy of Sciences (CAS)<br>260 West Donggang Road<br>730 000 Lanzhou, Gansu – P. R. China<br>lizq@ns.lzb.ac.cn |
| COLOMBIA               | Jair Ramirez Cadenas<br>INGEOMINAS<br>Diagonal 53 No. 34-53<br>Bogotá – Colombia<br>jairamir@ingeominas.gov.co  |
| ECUADOR/<br>ANTARCTICA | Bolívar Ernesto Cáceres Correa<br>Programa Glaciares Ecuador<br>INAMHI (Instituto Nacional de Meteorología e Hidrología)<br>Iñaquito 700 y Corea<br>16310 Quito – Ecuador<br>bcaceres@inamhi.gov.ec   |
| FRANCE                 | Christian Vincent<br>Laboratory of Glaciology and Environmental Geophysics (LGGE)<br>Domaine Universitaire, BP 96<br>38402 Saint Martin d'Hères, Cedex – France<br>vincent@lgge.obs.ujf-grenoble.fr   |
| GERMANY                | Ludwig N. Braun<br>Commission for Geodesy and Glaciology<br>Bavarian Academy of Sciences<br>Alfons-Goppel-Str. 11<br>80539 München – Germany<br>Ludwig.Braun@kfg.badw.de  |
| GREENLAND              | Andreas P. Ahlstrøm<br>Department of Quaternary Geology<br>The Geological Survey of Denmark and Greenland (GEUS)<br>Øster Voldgade 10<br>1350 København K – Denmark<br>apa@geus.dk  |



|            |  |
|------------|--|
| ICELAND    | Oddur Sigurðsson<br>Icelandic Meteorological Office<br>Grensásvegí 9<br>108 Reykjavík – Iceland<br>oddur@sol.vedur.is  |
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This chapter includes information which does not fit into the standard format. The intention is to document:

- index measurements on glacier fluctuations in cases where more complex observations are not possible, especially in relation to remote glaciers and glaciers which are systematically studied using reduced stake networks in combination with statistical considerations or flow calculations.
- information on special events which exhibit extraordinary processes or may pose risks to human activities, such as glacier surges, outbursts of ice-dammed lakes, ice avalanches, drastic retreat of tidal glaciers due to calving instabilities or eruptions of ice-clad volcanoes.

#### 4.1 Index Measurements

It is not without hesitation that WGMS publishes isolated point measurements, because they do not directly relate to the other components (mass balance, length change, inventories) of the integrated and coherent approach used in modern international glacier monitoring strategies. Furthermore, they are often not calibrated with independent methods such as repeated mapping. Experience shows that – over longer time periods – index measurements tend to disappear without leading to results of major scientific interest or significance. The WGMS is a service to collect standardized information for a coherent observation program at highest possible scientific levels and – as a consequence – strongly encourages the principal investigators and sponsoring agencies of index measurements to develop a clear concept that relates to the central monitoring strategy and can integrate in particular the long-term index observation series. For the same reason, index measurements are published in the “Fluctuations of Glaciers” but usually not stored in the WGMS database.

#### JAPAN (JP)

##### **Hamaguri Yuki (JP1)**

K. Fujita (DHAS) and A. Ohmura (IAC)

An inventory of perennial snow in central Japan was published by Higuchi et al. (1980). For one of these glacierets, glaciological mass balance measurements are available. The Hamaguri-yuki snow patch is located at 2730 m a.s.l. in the northern Japan Alps, central Japan. The snow patch is formed by the accumulation of a large amount of surplus snow on the northeast-facing lee slope of a mountain under a northwesterly monsoon during winter. The patch has been surveyed twice a year since 1967 (Ohata et al. 1993). A surface profile between two benchmarks, which is set close to Tsurugi-Gozen Logde along the centerline of the valley in north-eastern direction, is surveyed each year at the begin-

ning of the melting season (late May to early June) and again at the end (late September to early October). The surface profile is surveyed at 10 to 30 m horizontal intervals by tachymetry, trigonometric leveling, and theodolite with laser distance finder, and differential GPS. Details from past surveys and data are summarized by Ohata et al. (1993). Snow depths are reported as average values over sections between 50 and 100 m points along the profile line, as snow has tended to survive along this section at the end of the melting season for the past 40 years. The basal profile of this section was measured when the snow patch disappeared completely in the autumn of 1998.

Recently Fujita et al. (2010) showed that the annual ablation depth through the melting season significantly correlated with the initial depth at the beginning of the melting season, whereas a less significant correlation was found with a temperature index that was generally believed to correlate well with ablation. Fujita et al. (2010) examined and concluded that the scale effect of the snow patch, which appeared to modify the wind speed over the patch, had a more significant effect on snow ablation than did the radiation shadowing effect of surrounding mountains. In the case of a thinner and therefore smaller initial springtime snow patch, the speed of the local wind might be reduced over the snow surface, thereby suppressing ablation, whereas wind speed is not reduced (and ablation was not suppressed) in the case of a thicker snow patch.

The data series (1967–2010) was re-analyzed by Fujita and Ohmura (this volume) based on homogenized density assumptions for the conversion of the snow depths to mass balance water equivalent. For this purpose, all seasonal and annual differences of snow patch thicknesses were calculated first. Then, a firn density of  $750 \text{ kg m}^{-3}$  was used to obtain annual balance and a snow density of  $450 \text{ kg m}^{-3}$  was used to obtain winter balance. Summer balance was subsequently calculated as the difference between winter and annual balance. For 1967 and 1990, summer balance cannot be calculated with the above method due to lack of observational records. Therefore, a snow density of  $450 \text{ kg m}^{-3}$  was used, which is not winter snow density but average density of summer ablated snow.

The revised data series are given in Tables C and CC.

## NEW ZEALAND (NZ)

### End-of-summer snowline (EOSS) surveys

T.J. Chinn (APPC)

Since 1977, the end-of-summer snowline (EOSS) has been surveyed on 50 index glaciers distributed over New Zealand's Southern Alps. The surveys are carried out by hand-held oblique photography taken from a light aircraft (since 2001 also in digital form), where the position of the glacier snowline is recorded at the end of the summer season from a similar viewpoint each year. The flights are generally flown in March at an altitude between 2,700 and 3,000 m a.s.l. (9,000–10,000 ft). Back in the office, the snowlines visible on the photographs are sketched onto a map of each glacier and the accumulation and ablation areas are mapped and measured by digitiser. The elevation of the snowline is then accurately read from the glacier area-altitude curve. The data is reported as deviations from a balanced-budget equilibrium line altitude ( $\text{ELA}_0$ ) which is calculated from the area-altitude curve for each glacier, assuming a balanced-budget accumulation area ratio

( $AAR_0$ ) of 0.6. The most recently started mass balance monitoring program at Brewster Glacier will help to better link the EOSS data series to on-site measured glacier mass balance (cf. Stumm 2011). Methods, data and more details are given in Chinn (1995) and Chinn et al. (2005); Clare et al. (2002) and Stumm (2011) investigated the inter-annual EOSS in response to patterns of atmospheric circulation and sea surface temperature.

Table 4.1 Annual EOSS deviations (in m) from an assumed  $ELA_0$  (with  $AAR_0 = 0.6$ ). Number of observations (No. Obs.) and average are EOSS values given for each year.

| GLACIER          | GL.IN. No | $ELA_0$ | 2006 | 2007 | 2008 | 2009 | 2010 |
|------------------|-----------|---------|------|------|------|------|------|
| KAIKOURA RA      | 621/001   | 2490    |      | 14   | 50   | 5    | 13   |
| MT. ELLA         | 932B/012  | 2142    | 17   | 27   | 38   | 30   | 38   |
| MT FAERIE QUEENE | 646/006   | 2030    | -48  | -33  | 55   | 45   | -47  |
| MT. WILSON       |           | 1912    | 93   | 40   | 93   | 88   | 11   |
| MT. FRANKLIN     | 911A/002  | 1814    | 126  | -23  | 126  | 124  | 106  |
| ROLLESTON GL.    | 911A/004  | 1763    | 37   | 32   | 52   | 51   | 5    |
| MT. CARRINGTON   | 646C/027  | 1715    | 135  | -45  | 155  | 155  | -90  |
| MT. AVOCA        | 685F/004  | 1965    | 35   | 3    | 85   | 10   | 5    |
| MARMADUKE GL.    | 664C/012  | 1830    | 145  | 13   | 160  | 140  | -20  |
| RETREAT GL       | 906A/004  | 1742    | 48   | -22  | 68   | 63   | 18   |
| BROWNING RA      | 906A/001  | 1598    | 12   | 21   | 27   | 22   | 2    |
| DOUGLAS GL       | 685B/001  | 2040    | 240  | -44  | 340  | 243  | 245  |
| MT. BUTLER       | 685C/060  | 1840    | 75   | -2   | 120  | 85   | -33  |
| DAINTY GL.       | 897/019   | 1954    | -9   | -12  | 116  | 41   | -34  |
| KEA GL.          | 897/007   | 1820    | 78   | -36  | 150  | 200  | -83  |
| JASPUR GL.       | 897/003   | 1725    | 35   | -41  |      | 195  | 40   |
| SIEGE GL.        | 893A/006  | 1736    | -72  | -18  | 394  | 224  | -72  |
| VERTEBRAE #12    | 893A/012  | 1864    | -34  | -8   | 166  | 60   | -24  |
| VERTEBRAE #25    | 893A/025  | 1840    | -6   | -16  | 110  | 19   | -6   |
| RIDGE GL.        | 711L/024  | 2226    | 84   | 30   | 99   | 79   | 54   |
| LANGDALE GL.     | 711I/035  | 2186    | 109  | 74   | 394  | 129  | 76   |
| TASMAN GL.       | 711I/012  | 1790    | 60   | 6    | 235  | 175  | -20  |
| SALISBURY GL.    | 888B/003  | 1810    | 40   | 0    | 140  | 140  | -30  |
| JALF GL          | 886/002   | 1790    | -5   | 2    | 260  | 250  | -35  |
| CHANCEL. DOME    | 882A/007  | 1756    | 94   | 43   | 109  | 109  | -6   |
| GLENMARY GL.     | 711F/006  | 2175    | 30   | 15   | 105  | 35   | 5    |
| BLAIR GL.        | 711D/038  | 1938    | 22   | 34   | 132  | 34   | 15   |
| MT McKENZIE      | 711D/021  | 1904    | 6    | 15   | 111  | 31   | -2   |
| JACKSON GL.      | 868B/094  | 2070    | 15   | 14   | 93   | 12   | 2    |
| JACK GL.         | 875/015   | 1907    | 28   | 16   | 83   | 73   | -9   |
| MT. ST. MARY     | 711B/039  | 1926    | -31  | -16  | 194  | 74   | -41  |
| THURNEYSON GL.   | 711B/012  | 1970    | 10   | -7   | 140  | 130  | 5    |

Table 4.1 continued

| GLACIER         | GL.IN. No | ELA <sub>0</sub> | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------------|-----------|------------------|------|------|------|------|------|
| BREWSTER GL.    | 868C/020  | 1935             | -65  | -120 | 335  | 55   | -5   |
| MT. STUART      | 752I/104  | 1673             | 52   | -66  | 127  | 117  | 4    |
| LINDSAY GL.     | 867/002   | 1730             | 50   | -30  | 130  | 80   | -20  |
| FOG PK          | 752E/051  | 1987             | 45   | 13   | 118  | 45   | 45   |
| SNOWY CK        | 752C/103  | 2092             | 68   | -2   | 66   | 64   | 64   |
| MT. CARIA       | 863B/001  | 1472             | 43   | -17  | 48   | 48   | -74  |
| FINDLAY GL.     | 859/009   | 1693             | -3   | -32  | 139  | 112  | -61  |
| PARK PASS GL.   | 752B/048  | 1824             | 76   | 26   | 86   | 86   | 56   |
| MT. LARKINS     | 752E/002  | 1945             | 125  | 145  | 245  | 244  | 235  |
| BRYANT GL.      | 752B/025  | 1783             | 17   | -8   | 167  | -8   | -28  |
| AILS A MTS.     | 752B/013  | 1648             | -3   | -35  | 22   | 27   | -33  |
| MT. GUNN        | 851B/057  | 1593             | 17   | -43  | 52   | 197  | -78  |
| MT. GENDARME    | 797G/033  | 1616             | 32   | -40  | 33   | 34   | -46  |
| LLAWRENNY PKS.  | 846/035   | 1476             | 9    | -37  | 104  | 124  | -68  |
| BARRIER PK.     | 797f/004  | 1596             | 104  | -17  | 119  | 194  | -41  |
| MT. IRENE       | 797D/001  | 1563             | 70   | -85  | 50   | 68   | -90  |
| MERRIE RA.      | 797B/010  | 1515             | 150  | -56  | 155  | 160  | -75  |
| CAROLINE PK.    | 803/001   | 1380             | 30   | -44  | 50   | 40   | 0    |
| <i>No. Obs.</i> |           | 50               | 49   | 50   | 49   | 50   | 50   |
| <i>Average</i>  |           | 1836             | 45   | -7   | 132  | 95   | -3   |

## POLAND (PL)

**Pod Bula** (PL1617) and **Pod Cubryna** (PL902)

Z. Kijkowska-Wislinska, M. Wislinski and A. Wislinski (MPG), and B. Gadek (SUP)

Currently, four firn-and-ice patches (glacierets) are being monitored in the Tatra Mountains: Medeny, Mięszowiecki, Pod Bula, and Pod Cubryna. The observations from the latter two are shown in Tables A, B and D. The annual measurements of their length and area are taken between September and October. In the previous decade, until 2003, all the glacierets were in recession, then at the beginning of the 21<sup>st</sup> century they rapidly reached their current dimensions. In the period 2005–2010 the dimensions of the glacierets varied significantly from year to year, with a slight trend towards increase.

Recent related publications are from Adamowski and Wislinski (2010), Gadek (2008, 2011).



SLOVENIA (SI)

Triglav

M. Gabrovec (ZRC-SAZU)

In the Slovenian Alps, two glacierets are currently being under observation: Triglav in the Julian Alps (Julijske Alpe) and Skuta in the Kamnik and Savinja Alps (Kamniško-Savinjske Alpe). Annual results from Triglav were recently published by Gabrovec (2008) and are summarized in the table below.

Table 4.2 Observed changes in Triglav

| Year | Area (km <sup>2</sup> ) | Area Change (1,000 m <sup>2</sup> ) | Volume Change (1,000 m <sup>3</sup> ) |
|------|-------------------------|-------------------------------------|---------------------------------------|
| 1946 | 0.144                   | -                                   | -                                     |
| 1952 | 0.126                   | -18                                 | n.a.                                  |
| 1992 | 0.043                   | -83                                 | -1823                                 |
| 1999 | 0.011                   | -32                                 | -336                                  |
| 2005 | 0.007                   | -4                                  | -46                                   |
| 2008 | 0.006                   | -1                                  | -9                                    |

SWITZERLAND (CH)

**Clariden** (CH0141), **Grosser Aletsch** (CH0005), **Silvretta** (CH0090)

A. Bauder (VAW), M. Huss (DGUF), and G. Kappenberger (G.K.)

Long-term seasonal snow water equivalent observations have been carried out at two individual stakes on Claridenfirn (upper and lower) since 1914 and 1915, at one stake on Grosser Aletschgletscher (P3) since 1918, and at one stake on Silvrettagletscher (BU) since 1915. Results from all four sites were reported in the Swiss Glaciological Reports (2009, and earlier issues) and from Claridenfirn also in the FoG Vol. VIII (WGMS 2005). All measurement sites are located at or above the long-term equilibrium line in locally flat terrain. The monitoring program included readings at the stake, snow probing and measurements in snow pits or by drilling to a marked horizon. The measurement interval was consistent at all sites with two field surveys at the end of the winter between April and June and again in September. Density information was not systematically reported before 1960 (Firnberichte 1914–1978; Müller and Kappenberger 1991; Glaciological reports 1881–2009). The measurement series have few data gaps. The stakes are annually moved back to their initial positions, which remained unchanged, except for the stake on Silvretta that was moved about 200 m to the north without significant change in elevation in 1987. Lowering in surface elevation due to the general glacier mass loss since 1914 is between 10 m at Aletsch (P3) and 21 m at Clariden (lower). In order to obtain comparable point mass balance series based on the winter and late summer field surveys performed on varying dates, the original observation series were homogenized by Huss and Bauder (2009) using a daily mass balance model. Based on meteorological data, point mass balance was temporally interpolated between the exact dates of the field visits and data gaps could be filled. Source: Glaciological Report (2011).

Table 4.3 Summary of the homogenized long-term mass balance series of individual stake measurements for 1914–2007, as available from the Swiss Glaciological Reports published until present. Winter and annual balances are given for fixed date periods 1 OCT to 30 APR (BW) and 1 OCT to 30 SEP (BA). Source: Glaciological Report (2011).

| period  | Aletsch (P3) |      | Clariden (lower) |       | Clariden (upper) |      | Silvretta (BU) |       |
|---------|--------------|------|------------------|-------|------------------|------|----------------|-------|
|         | BW           | BA   | BW               | BA    | BW               | BA   | BW             | BA    |
|         | (mm w.e)     |      | (mm w.e)         |       | (mm w.e)         |      | (mm w.e)       |       |
| 1914/15 | 1923         | 3100 | 2104             | 1426  | 2171             | 2584 | 2184           | 1363  |
| 1915/16 | 1992         | 3316 | 2011             | 2009  | 2027             | 2629 | 2034           | 510.0 |
| 1916/17 | 1791         | 2241 | 2080             | -461  | 1772             | 1201 | 1400           | -1011 |
| 1917/18 | 1961         | 3104 | 1894             | 1129  | 1937             | 2226 | 850            | 686   |
| 1918/19 | 1519         | 1441 | 2128             | 1021  | 2150             | 1912 | 1541           | 355   |
| 1919/20 | 2327         | 2636 | 2350             | 642   | 2421             | 1546 | 2219           | 585   |
| 1920/21 | 731          | 387  | 692              | -1613 | 754              | -371 | 762            | -2266 |
| 1921/22 | 2317         | 2962 | 2113             | 1021  | 2258             | 1905 | 940            | 399   |
| 1922/23 | 1865         | 1757 | 2181             | 852   | 2203             | 1831 | 1269           | 62    |
| 1923/24 | 1962         | 2732 | 2200             | 1122  | 2296             | 2061 | 1470           | 382   |
| 1924/25 | 1185         | 2142 | 1768             | 751   | 2483             | 2063 | 1227           | 393   |
| 1925/26 | 1143         | 1397 | 1542             | 341   | 1701             | 2079 | 1665           | 464   |
| 1926/27 | 1985         | 2528 | 2541             | 1482  | 2682             | 2273 | 1644           | 778   |
| 1927/28 | 1481         | 1409 | 1422             | -1360 | 1555             | -207 | 182            | -100  |
| 1928/29 | 2341         | 2213 | 2070             | -603  | 2105             | 652  | 1283           | -709  |
| 1929/30 | 1282         | 2007 | 1473             | 590   | 1603             | 1424 | 931            | -314  |
| 1930/31 | 1777         | 2453 | 4039             | 960   | 2894             | 2133 | 1431           | 574   |
| 1931/32 | 959          | 1414 | 1843             | -279  | 1663             | 637  | 1006           | -696  |
| 1932/33 | 1438         | 2858 | 1566             | 1198  | 1563             | 1733 | 1042           | 427   |
| 1933/34 | 1183         | 1626 | 872              | -1190 | 1284             | 393  | 821            | -340  |
| 1934/35 | 2329         | 2257 | 2489             | 306   | 2566             | 1630 | 2330           | 432   |
| 1935/36 | 2369         | 3637 | 2278             | 484   | 2380             | 1416 | 1620           | 358   |
| 1936/37 | 2455         | 2976 | 2391             | 969   | 2401             | 1651 | 1563           | 348   |
| 1937/38 | 1848         | 3420 | 1644             | 169   | 1801             | 977  | 1201           | -263  |
| 1938/39 | 1353         | 2472 | 2167             | 230   | 2039             | 1399 | 1402           | -165  |
| 1939/40 | 1941         | 3848 | 2501             | 1696  | 2608             | 2248 | 1688           | 966   |
| 1940/41 | 1746         | 2272 | 1814             | 621   | 1865             | 1786 | 1260           | 525   |
| 1941/42 | 1341         | 1731 | 1418             | -545  | 1760             | 970  | 1171           | -672  |
| 1942/43 | 1718         | 2285 | 1450             | -531  | 1590             | 1077 | 1206           | -58   |
| 1943/44 | 1202         | 1328 | 1319             | 8     | 1421             | 926  | 1685           | -229  |
| 1944/45 | 2216         | 2616 | 2631             | 946   | 2708             | 1849 | 2476           | 238   |
| 1945/46 | 1435         | 2404 | 2051             | -49   | 2095             | 1118 | 1296           | 9     |
| 1946/47 | 1798         | 1212 | 1335             | -278  | 1483             | -867 | 1104           | -204  |

Table 4.3 continued

| period  | Aletsch (P3) |      | Clariden (lower) |       | Clariden (upper) |      | Silvretta (BU) |       |
|---------|--------------|------|------------------|-------|------------------|------|----------------|-------|
|         | BW           | BA   | BW               | BA    | BW               | BA   | BW             | BA    |
|         | (mm w.e)     |      | (mm w.e)         |       | (mm w.e)         |      | (mm w.e)       |       |
| 1947/48 | 2540         | 4256 | 2410             | 1126  | 2548             | 2463 | 2313           | 1125  |
| 1948/49 | 1424         | 1067 | 1330             | -1490 | 1638             | -148 | 1039           | -1150 |
| 1949/50 | 1665         | 1496 | 1772             | -1890 | 1767             | 71   | 1256           | -1105 |
| 1950/51 | 2029         | 2534 | 2414             | 320   | 2809             | 1562 | 1571           | -46   |
| 1951/52 | 1993         | 1669 | 2197             | -152  | 2286             | 1145 | 1238           | -444  |
| 1952/53 | 1823         | 2297 | 2683             | 427   | 2312             | 1346 | 1613           | -173  |
| 1953/54 | 1607         | 2795 | 1156             | 498   | 1487             | 1775 | 1190           | 145   |
| 1954/55 | 1340         | 1899 | 2579             | 1361  | 2667             | 2234 | 1945           | 692   |
| 1955/56 | 1559         | 2562 | 1848             | 307   | 1843             | 1457 | 1616           | 323   |
| 1956/57 | 1563         | 1210 | 1846             | 973   | 1840             | 1849 | 1432           | 493   |
| 1957/58 | 1685         | 1588 | 2110             | -336  | 2214             | 692  | 1493           | -621  |
| 1958/59 | 1751         | 1656 | 1602             | -524  | 1703             | 578  | 1205           | -1210 |
| 1959/60 | 1679         | 2710 | 1655             | 951   | 1845             | 2152 | 1060           | 834   |
| 1960/61 | 1968         | 2124 | 2062             | 55    | 2137             | 1550 | 1339           | 89    |
| 1961/62 | 1610         | 1546 | 2029             | 494   | 2239             | 1179 | 1375           | -537  |
| 1962/63 | 1667         | 1772 | 1215             | -529  | 1546             | 790  | 1014           | -910  |
| 1963/64 | 1470         | 1366 | 1240             | -1097 | 1548             | 569  | 1077           | -1425 |
| 1964/65 | 1671         | 2929 | 2115             | 1502  | 2107             | 2457 | 1547           | 1156  |
| 1965/66 | 1900         | 2412 | 2759             | 1685  | 2539             | 2232 | 1503           | 1335  |
| 1966/67 | 2135         | 2717 | 2589             | 771   | 2437             | 1673 | 1658           | 348   |
| 1967/68 | 1790         | 2537 | 1913             | 1782  | 2035             | 2688 | 1464           | 351   |
| 1968/69 | 1919         | 2244 | 1466             | 398   | 1397             | 1280 | 899            | -302  |
| 1969/70 | 1793         | 2060 | 2578             | 1059  | 2435             | 1342 | 1424           | 136   |
| 1970/71 | 1073         | 1207 | 1390             | -190  | 1651             | 1069 | 997            | -767  |
| 1971/72 | 1450         | 1678 | 932              | 203   | 1097             | 951  | 692            | 88    |
| 1972/73 | 1334         | 1441 | 1835             | -102  | 1638             | 347  | 1068           | -1209 |
| 1973/74 | 1196         | 2115 | 1983             | 1407  | 2090             | 2177 | 1332           | 516   |
| 1974/75 | 2015         | 2493 | 3427             | 1469  | 3016             | 2250 | 1635           | 439   |
| 1975/76 | 1592         | 1890 | 1331             | 385   | 1304             | 960  | 906            | 396   |
| 1976/77 | 2561         | 3234 | 2195             | 981   | 2707             | 2327 | 1511           | 250   |
| 1977/78 | 2212         | 2885 | 2278             | 1511  | 2287             | 2281 | 1281           | 850   |
| 1978/79 | 1941         | 1639 | 1621             | 436   | 1643             | 1006 | 1101           | -10   |
| 1979/80 | 2376         | 3140 | 2531             | 1628  | 2436             | 2517 | 1590           | 868   |
| 1980/81 | 1681         | 2231 | 2142             | 1156  | 1965             | 1574 | 1607           | 531   |
| 1981/82 | 1734         | 1905 | 2659             | 154   | 2310             | 688  | 1699           | -525  |

Table 4.3 continued

| period  | Aletsch (P3) |      | Clariden (lower) |       | Clariden (upper) |      | Silvretta (BU) |       |
|---------|--------------|------|------------------|-------|------------------|------|----------------|-------|
|         | BW           | BA   | BW               | BA    | BW               | BA   | BW             | BA    |
|         | (mm w.e)     |      | (mm w.e)         |       | (mm w.e)         |      | (mm w.e)       |       |
| 1982/83 | 2201         | 1796 | 1969             | 508   | 1877             | 866  | 1412           | -342  |
| 1983/84 | 1660         | 2855 | 1702             | 1565  | 1923             | 2265 | 1184           | 677   |
| 1984/85 | 1212         | 1673 | 1397             | -311  | 1541             | 687  | 1195           | 1138  |
| 1985/86 | 1952         | 2516 | 1681             | -179  | 1987             | 781  | 1162           | -910  |
| 1986/87 | 2115         | 3067 | 1806             | 1641  | 1743             | 2062 | 1079           | -581  |
| 1987/88 | 1823         | 2235 | 2709             | 787   | 2437             | 1217 | 1393           | -495  |
| 1988/89 | 1708         | 2665 | 1860             | 733   | 2084             | 843  | 1252           | -412  |
| 1989/90 | 1362         | 1800 | 1839             | -343  | 1917             | 481  | 1179           | -769  |
| 1990/91 | 1500         | 1835 | 1031             | -1182 | 1338             | 352  | 763            | -1769 |
| 1991/92 | 1168         | 1061 | 2163             | -557  | 2178             | 468  | 1879           | -1095 |
| 1992/93 | 2028         | 2952 | 1739             | 273   | 1987             | 1103 | 1607           | -326  |
| 1993/94 | 1805         | 2233 | 2123             | -129  | 2277             | 1157 | 1528           | -857  |
| 1994/95 | 2306         | 2781 | 2187             | 1155  | 2389             | 1784 | 1554           | 94    |
| 1995/96 | 1036         | 1993 | 799              | -17   | 1072             | 942  | 646            | 482   |
| 1996/97 | 1862         | 2056 | 2217             | 222   | 2069             | 937  | 1490           | 51    |
| 1997/98 | 1554         | 1752 | 1776             | -648  | 1799             | 460  | 1013           | -1056 |
| 1998/99 | 1371         | 1744 | 2855             | 969   | 2818             | 1532 | 2118           | -274  |
| 1999/00 | 1858         | 2385 | 2236             | 743   | 2106             | 1126 | 1885           | 283   |
| 2000/01 | 3009         | 4553 | 1934             | 797   | 2421             | 1545 | 1693           | 985   |
| 2001/02 | 1009         | 2802 | 1361             | -143  | 1353             | 572  | 891            | -858  |
| 2002/03 | 1840         | 920  | 2164             | -1478 | 2267             | -365 | 1350           | -2425 |
| 2003/04 | 1678         | 2391 | 1730             | 321   | 1997             | 1308 | 1567           | 131   |
| 2004/05 | 1536         | 1906 | 1286             | -626  | 1268             | 347  | 1038           | -1003 |
| 2005/06 | 1277         | 1527 | 1160             | -905  | 1391             | 278  | 1214           | -1345 |
| 2006/07 | 1150         | 1988 | 501              | -1050 | 1098             | 768  | 762            | -865  |

U.S.A. (US)

### **Taku Glacier (US1805)**

M. Pelto (JIRP)

Taku Glacier is a temperate, maritime valley glacier in the Coast Mountains of Alaska. With an area of 671 km<sup>2</sup>, it is the principal outlet glacier of the Juneau Icefield. It attracts special attention because of its continuing, century-long advance (Pelto and Miller 1990; Post and Motyka 1995), its positive mass balance from 1946 to 1988 (Pelto and Miller 1990), and its fjord extending 38 to 48 km upglacier from its terminus (Nolan et al. 1995).

The Juneau Icefield Research Program (JIRP) has conducted fieldwork annually on the Taku Glacier since 1946 (Miller 1963; Peltó and Miller 1990). Due to the large extent of Taku Glacier, the mass balance is not determined by the classical glaciological approach (cf. Østrem and Brugman 1991) but with a combination of (i) snow pit measurements in the accumulation area, (ii) ablation stake measurements along a survey profile, and (iii) observations of the transient snowline (TSL) and the equilibrium line altitude (ELA). JIRP has relied on applying this method in a consistent way since 1946 (Peltó and Miller 1990; Miller and Peltó 1999). Snow water equivalent measurements are carried out at 17 test pits at fixed locations ranging in elevation from 950 to 1,800 m a.s.l. These snow pit measurements are completed during late July and August and are adjusted to end-of-the-balance-year values based on variations in the TSL, observed ablation and the measured balance gradient. Ablation during the field season is observed at stakes along survey lines where repeat surveys are completed and through migration of the TSL. Prior to the availability of consistent annual summer satellite imagery in 1984, the TSL was determined by field observations by JIRP in early July, late July, mid-August and in early September with this last observation assumed to be the ELA. From 1984 to 1997 remote sensing images supplemented the field observations. After 1998 remote sensing imagery has provided many of the TSL and ELA observations and since 2004 the majority. Results from these observations (cf. Peltó et al. 2008) indicate a positive mass balance from 1946 to 1988, averaging  $0.42 \text{ m w.e. a}^{-1}$ , which led to a glacier thickening. From 1988 to 2006 an important change occurred and the mean annual balance became negative, averaging  $-0.14 \text{ m w.e. a}^{-1}$ , and the glacier thickness ceased increasing along the survey profile. In the present volume, the mass balance data series of Taku Glacier is given in Tables C and CC.

Sources: Peltó et al. (2008), Peltó (2011).

## 4.2 Special Events

### ARGENTINA (AR)

#### Grande del Nevado del Plomo (AR3304)

#### glacier surge

L. Ferri Hidalgo, L. E. Espizua and P. Pitte (IANIGLA)

The Grande del Nevado glacier had a new surge event during 2007. Between the satellite images of 25 September 2006 and 20 March 2007, after 23 years of a quiescent phase, the glacier started to move and advanced 400 m. In the autumn of 2007 it flowed down the valley about 600 m in 16 days, with a maximum velocity of  $34 \text{ m d}^{-1}$ . Between 23 May 2007 and 28 September 2007, there were no satellite images available for monitoring the glacier due to the presence of clouds and snow, but the main advance occurred during this period. The glacier moved 1.8 km, reaching the outcrop named Roca Pulida, and its front broadened around it. The difference between this new surge event and those occurring in 1934 and 1984 (cf. Helbling 1935, Espizua 1986, Espizua and Bengochea 1990) is that in this case an ice-dammed lake was not formed upstream of the glacier front. Nowadays the Plomo river flows through a subglacial tunnel of the Grande del Nevado glacier front.

The total volume of displaced ice and debris during the whole event is estimated to be about  $83 \times 10^6 \text{ m}^3$ .

Information on earlier surge events of this glacier can be found in Helbling (1935), Espizua (1986), Espizua and Bengochea (1990), and WGMS (1993).

## CANADA (CA)

### Steele (CA3331)

### rock/ice avalanche

D. Schneider (GIUZ)

On 24 July 2007, a very large rock/ice avalanche of  $27 \times 10^6 \text{ m}^3$  rock, debris and ice from Mt. Steele traveled 6 km across Steele Glacier. The main event was anteceded by the opening of a crevasse on the steep glacier 9 days before the main event. A small debris flow occurred around 21 July 2007, followed by a larger ice avalanche on 22 July 2007 and the main event on 24 July 2007 which had the failure plane within bedrock. The distal part of the mass moved up an opposite ridge then slid back again over an extended zone.

More information can be found in Lipovsky et al. (2008) and Schneider et al. (2011).

## COLOMBIA (CO)

### Nevado del Huila (CO2689)

### flood / lahar / volcanic eruption

C. Huggel (GIUZ)

Nevado del Huila is an active volcano located in the southern part of Colombia's Cordillera Central, with a maximum elevation of 5364 m a.s.l. The volcano is covered by close to  $10 \text{ km}^2$  of glacier ice. In February 2007 seismicity significantly increased and for the first time in recent history the volcano erupted. Two comparably small phreatic eruptions (Volcanic Explosivity Index  $\text{VEI} = 2$ ) were recorded on 19 February and 18 April 2008. The erupted material, mixed with snow and ice, produced lahars that traveled down the Páez River as far as 150 km. Yet only the second and bigger event caused severe damage to infrastructure, but no lives were claimed thanks to early warning systems in place. Each eruptive event was accompanied by the formation of large fissures in the summit region with a length of 2 km, widths of 50 to 80 m, and continued strong fumarolic activity following the eruptions. Although the origin of the released water that formed the lahars is not completely understood, it is clear that it was expelled to a significant extent from the arising fissures, as it cannot have been from snow- and icemelting alone. It is suspected that the expelled water was linked to hydrothermal water reservoirs. In November 2008 a phreatomagmatic eruption occurred, creating a crater from which a dome subsequently formed. Again a large lahar formed during this eruption. The sizes of the lahars are highly remarkable, with  $30$  to  $50 \times 10^6$  and  $300 \times 10^6 \text{ m}^3$  in 2007 and 2008, respectively. The

minimum loss of lives considering the magnitude of the events, underlines the remarkable success of the early warning system and other prevention activities.

More information can be found in Worni et al. (2012).

FRANCE (FR)

**Glacier des Drus (FR3696)**

**rockfall**

Text compiled from Ravanel and Deline (2008)

The whole Bonatti Pillar of the Aiguille Verte - Les Drus collapsed in 2005 in four events over several hours, involving a total volume of  $0.265 \pm 10 \times 10^6 \text{ m}^3$ . The 2005 debris covers c.  $0.095 \times 10^6 \text{ m}^3$  on the small Glacier des Drus as well as part of the large moraine complex, over previous supraglacial rockfall deposits. The debris cover and the large moraine suggest that the large 2005 rockfall is the last in a series that affected the west face of Le Petit Dru during the Holocene. The sequence of rockfalls, which have affected the west face of Les Drus since 1950, is an example of instability that develops upwards from the foot of a rock slope. Such a retrogressive erosion probably started more than a century before, as indicated by the visible scar on photographs of the 1850s, and was activated in 1950, before acceleration in the last decade

**Glacier de Rochemelon (FR)**

**flood prevention**

C. Vincent (CNRS)

Supraglacial Lac de Rochemelon was formed 50 years ago behind an ice dam and grew steadily until 2004. In October 2004, the volume of the Rochemelon lake reached  $0.65 \times 10^6 \text{ m}^3$ , bringing its surface within 0.2 m of the top of the ice dam. To eliminate the threat to towns located below in the event of an overflow, public authorities were alerted and the lake was drained artificially in October 2004 and during the summer of 2005 (Vincent et al. 2010).

**Tête Rousse (FR)**

**flood prevention**

C. Vincent (CNRS)

Extensive geophysical surveys were performed between 2007 and 2010 in order to reassess the risk of an outburst flood from the Tête Rousse glacier, where outburst flooding from an intraglacial lake caused 175 fatalities in 1892. Our geophysical survey combined ground-penetrating radar measurements and nuclear magnetic resonance imaging. We found a subglacial water-filled reservoir with a volume of  $0.055 \times 10^6 \text{ m}^3$ . Artesian outpourings occurred when the subglacial cavity was reached by two borehole drillings, indicating that the hydrostatic water pressure exceeded the ice pressure at the bottom of

the cavity. On the basis of these geophysical and glaciological findings, we warned the public authorities in July 2010 of the risk facing the 3,000 inhabitants downstream of the glacier. The subglacial reservoir was drained artificially (Vincent et al. 2010; Legchenko et al. 2011).

GREENLAND (GL)

**Petermann (GL3667)**

**calving instability**

On 4 August 2010, about one-fifth of the floating ice tongue of Petermann Glacier calved. The resulting gigantic iceberg had an area of about  $253 \pm 17 \text{ km}^2$ .

More details can be found in Falkner et al. (2011)

ICELAND (IS)

**Eyjafjallajökull (IS3353)**

**volcanic eruption / jökulhlaup (flood)**

Oddur Sigurðsson (IMO)

On 14 April 2010 the volcano which lies directly beneath Eyjafjallajökull erupted. Due to contact with ice the lava was chilled quickly and fragmented into small glass particles which were carried into the eruption plume. Additionally, the meltwater caused several floods and filled the proglacial lagoon at Gígjökull with debris. It may take decades for the glacier to recover the lost mass and, therefore, an unusually rapid retreat is to be expected at the terminus of Gígjökull for an extended period. The huge eruption plume which originated from the event on 14 April 2010, caused severe air travel disruption in Europe. The event was preceded by an eruption which had begun on 20 March, 2010 but which did not affect the glacier. It was located on the mountain pass between the Eyjafjallajökull and Mýrdalsjökull ice caps.

ITALY (IT)

**Belvedere (Macugnaga) (IT618)**

**rockfall**

Text compiled from Fischer et al. (2006, 2011).

Since about 1990, new slope instabilities have developed in the Monte Rosa east face within the altitudinal permafrost belt in bedrock areas and in relation to hanging glaciers. Frequent small-scale as well as several large-scale rock and ice avalanches and debris flow events have led to significant topographic change. A major rock/ice avalanche was reported in the summer of 1990 and several rock and ice avalanche events followed, detaching large parts of a hanging glacier and underlying bedrock. In August 2005, an ice avalanche with a volume of about  $1.1 \times 10^6 \text{ m}^3$  occurred (also reported in WGMS, 2008),



and in April 2007 a rock avalanche of  $0.2 \times 10^6 \text{ m}^3$  detached from the uppermost part of the face where continuous permafrost is expected. The volume of the 2005 ice avalanche is among the largest documented in the European Alps over the past 100 years. Such slope failures can trigger far-reaching chain reactions, especially in combination with the temporary supraglacial lake 'Effimero' which developed in connection with a surge-type behavior of the Belvedere Glacier in September 2001 and reached a maximum volume of  $3 \times 10^6 \text{ m}^3$  in the following two summers. Rock and ice avalanches from the Monte Rosa east face into the full lake could have triggered a catastrophic outburst with an extended range of destruction downstream. In view of the ongoing or even enhanced atmospheric warming, it is very likely that slope failures from bedrock and hanging glaciers on the Monte Rosa east face will continue to be a source of hazards for the populated down-valley region.

More information on these and other events at the Monte Rosa east face, above Belvedere Glacier, can be found in Fischer et al. (2006) and Fischer et al. (2011).

#### **Calderone (IT1107)**

#### **thunderstorm / earthquake**

M. Pecci (IMONT)

During the night of 5 to 6 April 2009, an earthquake with a magnitude of 6.3 occurred in the region at 03:32 a.m. local time and resulted in 309 casualties. A secondary effect of the earthquake was a series of avalanches and rock/debris instabilities accumulating on the surface of Calderone during the summer of 2009, continuing into summer 2010.

#### **NORWAY (NO)**

#### **Comfortlessbreen (NO3348)**

#### **glacier surge**

Reported by J. Alean via Cryolist (20. August 2009)

Comfortlessbreen is a large valley glacier in Svalbard that began a major surge event in April 2008, following many decades of recession. Despite 16 years of continued recession between 1992 and the onset of the surge, the glacier is now more advanced than in 1992.

#### **PERU (PE)**

#### **Chicon (PE3614)**

#### **flood / ice avalanche**

C. Portocarrero (INRENA)

On 17 October 2010, at around 11 p.m., a flood event started from the Chicon Mountain of the Urubama Mountain Range in Cusco, probably triggered by an ice avalanche into a periglacial lake. The flood affected the center (principal avenue) of the town of Urubamba.

**Hualcan (CH3615)****flood / ice avalanche**

A. Cochachin, O. Vilca, C. Portocarrero (INRENA), and C. Huggel (GIUZ). Text partly compiled from Carey et al. (2012)

At approximately 8 a.m. on 11 April 2010 a rock/ice avalanche detached from the steep SW slope of Mount Hualcán (6,104 m a.s.l.), starting from warm permafrost at an altitude of about 5,400 m a.s.l.. The initial volume is estimated between  $0.2 \times 10^6 \text{ m}^3$  and  $0.4 \times 10^6 \text{ m}^3$ , which probably increased along the flow path. The avalanche travelled over the steep surface of Glacier 513 into Lake 513 at 4,400 m a.s.l. The lake was impacted by the avalanche along its longitudinal axes. Despite the 20 m freeboard at the bedrock dam in April 2010 avalanche, the impact of the avalanche caused an overtopping. The overflowing volume of water may have been on the order of  $1 \times 10^6 \text{ m}^3$ . Strong erosion started below the lake, but most sediments were deposited in the upper part of the plane of Pampa de Shonquil at about 3,650 m a.s.l. The flood traveled further, and in the once again steeper part of the Rio Chucchún catchment a debris flow formed again, travelling down to the provincial capital of Carhuaz. Fortunately, no lives were lost, but damage to land and infrastructure was considerable. It is clear that without the prevention measures installed at the Laguna 513, completed in the 1990's – tunnels in the bedrock sill that lowered the lake level by over 20 m – a much larger disaster would have resulted.

More information on this event can be found in Haeberli et al. (2010), Valderama and Vilca (2010), and Carey et al. (2012)

**Matara (PE3616)****flood**

M. Zapata (INRENA)

On 22 December 2006 an outburst flood of the periglacial Lago Matara, Huari Province, Ancash Department, originated from the collapse of a reservoir dam built in the same year. The flood caused infrastructure damage to roads, bridges, and footpaths.

**SWITZERLAND (CH)****Fee North (CH0392)****ice avalanche**

In the early evening of 15 September 2009, an ice avalanche of about  $0.05 \times 10^6 \text{ m}^3$  broke off of Fee Glacier, above the village of Saas Fee. Over the weekend (19-20 September 2009) another approx.  $0.1 \times 10^6 \text{ m}^3$  detached from the same ridge. Elevation difference and run-off distance are not reported. For safety reasons, hiking trails, aerial cableways and a restaurant in the region of Spielboden had to be closed for several days.

**Unterer Grindelwald (CH0058)****rockfall / flood**

On 10 June 2006, rockfalls of several hundred cubic meters were observed together with initial slope movements and two steep 250-m-long valley-parallel open cracks. On the northern front block, frequent rockfalls were recorded with rockfall volumes of 2,530 m<sup>3</sup> between 11 and 12 July and 450 m<sup>3</sup> in the following 24 h. On 13 July, a column showed significantly higher movement rates, up to 1.25 m d<sup>-1</sup>, which led to its collapse and finally to a partial collapse of the northern block with an estimated volume of 0.169 x 10<sup>6</sup> m<sup>3</sup>. Finally, about 2 x 10<sup>6</sup> m<sup>3</sup> of rock detached, deposited on the glacier tongue, and collapsed in August 2008. The rockfall was most probably caused by the retreat of the glacier tongue since 1860 (which was about 200 m thick at this location) and the subsequent relaxation of the side walls.

Above the rockfall location and the debris-covered tongue, a supraglacial lake formed and repeatedly drained, sometimes continuously (e.g., July 2008), sometimes in outburst floods (e.g., May 2008). Between January 2009 and spring 2010, a tunnel was drilled through the bedrock in order to drain the lake and to limit the maximum lake level to 500,000 m<sup>3</sup>. The tunnel is 2 km long and cost about 15 million Swiss Francs. For this glacier, at least five historical glacier outburst floods are known from written sources since about 1600 (Raymond et al. 2003). The last of these events happened on 2 July 1951. According to the local newspaper, the event happened at 4:30 a.m. and caused a five-meter-high flood wave in the gorge of Lütschine. The water, ice and debris flood destroyed two bridges and flooded the region around the train station of Grindelwald Grund.

More information about these latest events is found in Oppikofer et al. (2008), Werder et al. (2010), Fischer et al. (2012) and on the website <http://www.gletschersee.ch>. Earlier events are summarized in Raymond et al. (2003).

U.S.A. (US)

**Bagley Ice Field (US)****rock/ice avalanche**

D. Schneider (GIUZ)

In July 2008, two rock avalanches of approx. 1.5 x 10<sup>6</sup> m<sup>3</sup> descended approximately 2 km over the Bagley Ice Field, 8 km northeast of Mt. Steller. The mass included some ice from overlying glaciers and eroded further snow, firn and ice from the underlying ground. On 6 August 2008, a large rock/ice avalanche of 22 x 10<sup>6</sup> m<sup>3</sup> from Mt. Miller ran 4.5 km across the Bagley Ice Field. The mass included a lot of ice from higher lying glaciers.

More information can be found in Huggel et al. (2010) and Schneider et al. (2011).

**Hubbard (US87)****glacier surge**

Reported by L. Copland and B. Molnia via Cryolist (July 2009)

Three tributaries of Hubbard Glacier started surging in winter 2009 (likely around January to March). The surges are centred around Mt. Queen Mary (60°33'N, 139°50'W), and are in three parallel valleys. Dramatic crevassing, surface drawdown and strand lines were observed. Furthermore, a significant amount of sediment was exposed, several 100 meters west of Gilbert Point. Surges of Hubbard Glacier in the past dammed the water in the Russell Fjord, leading to the formation of the ice-dammed Russell Lake, which burst out in 2002 (cf. WGMS 2008). In 2009 the distance from the glacier front to Gilbert Point was reported to be 200 m.

**Malaspina (US3347)****glacier surge**

Reported by B. Molnia via Cryolist (July 2009)

A USGS aerial survey on 3 July 2009 revealed that the eastern side of the Malaspina Glacier was surging. Multiple fractures, blue-water lakes, and large open crevasses were some of the features observed.

**Red (US3335)****ice avalanche**

D. Schneider (GIUZ)

On 25 September 2008, an ice avalanche of approx.  $11 \times 10^6 \text{ m}^3$  detached in the uppermost part of Red Glacier and traveled for 7.5 km onto the debris-covered part of the glacier. The avalanche was almost entirely composed of glacier ice and snow, having very low debris content. The event was one in a series of very large ice avalanches on Red Glacier which seem to occur every 3 to 4 years. Confirmed previous events of comparable size or even larger and with higher rock/debris contents, took place in the years 1960, 1978, 1980, 1994, 1997, 2000 and 2003. A relation between glacier stability and local geothermal activity of the volcano at the failure zone is therefore very likely.

More information can be found in Caplan-Auerbach et al. (2004), Caplan-Auerbach and Huggel (2007), Huggel et al. (2007), and Schneider et al. (2011).

## CHAPTER 5 THE ANNEXED MAPS

The following eleven maps can be found in the pocket at the back of this volume. A brief description of the maps with information regarding the purpose of the particular map, its accuracy, and details on the surveying, cartography and reproduction, is included in this chapter. The maps and glaciers concerned are:

1. Glacial and Periglacial Inventory of the Río Mendoza Basin, Argentina (1:250,000)
2. The glaciers of Goldberggruppe, 1850–1931–1969–1998–2009, Hohe Tauern, Austria (1:50,000)
3. Stereo-photogrammetric map of Goldbergkees, 1909, Hohe Tauern, Austria (1:10,000)
4. Urumqi Glacier No. 1, 1962–2006, China
5. Blaueis, 1989–2007, Germany (1:5,000)
6. Höllentalferner, 1999–2006, Germany (1:5,000)
7. Nördlicher Schneeferner, 1999–2006, Germany (1:5,000)
8. Südlicher Schneeferner, 1999–2006, Germany (1:5,000)
9. Watzmanngletscher, 1989–2007, Germany (1:5,000)
10. Lewis Glacier, Mount Kenya, 2010 (1:2,500)
11. Topographic Change of Findelengletscher, Valais, Switzerland, 2005–2010 (1:15,000)

In a joint project with the library of the Department of Geography, University of Zurich, Switzerland, the WGMS scanned all maps published in earlier FoG volumes. These maps and accompanying texts are now available in digital formats from our website: <http://www.wgms.ch>.

## **AN UPDATED GLACIAL AND PERIGLACIAL INVENTORY OF THE RÍO MENDOZA BASIN IN THE CENTRAL ANDES OF ARGENTINA (1:250,000)**

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We present an updated glacial and periglacial inventory of the Río Mendoza Basin in the Andes of central Western Argentina based on ASTER and ALOS scenes from 2009, 2010 and 2011. Clean ice and perennial snowfields were identified by an automatic extraction technique whereas debris-covered glaciers and rock glaciers were manually digitized on the screen. We identified 1,611 glacial and periglacial landforms that cover a total area of 570.67 km<sup>2</sup> distributed between 2,958 m a.s.l. and 6,900 m a.s.l.. The results were validated through several field campaigns performed in different sectors of the basin in the summer of 2012. Different glaciers and rock glaciers were surveyed in order to check their location, current state, and primary classification. The field surveys were complemented with photographs and GPS data. A comparison with a previous inventory of this basin based on aerial photographs from 1963 (Corte and Espizua 1981) shows an important recession of clean-ice glaciers, which is not as evident on debris-covered glaciers and rock glaciers. This new inventory of the Río Mendoza Basin will be part of the National Glacial and Periglacial Inventory of Argentina which is currently under way under the coordination of IANIGLA.

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# THE GLACIERS OF GOLDBERGGRUPPE, HOHE TAUERN, AUSTRIA: 1850 – 1931 – 1969 – 1998 – 2009 (1:50,000)

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The map illustrates the glacier area change in 32 glaciers of Goldberggruppe in Austria's Hohe Tauern. The analysis covers the period from the maximum glacial extension of the Little Ice Age (LIA, ~1850) until 2009.

The Goldberggruppe is situated on the Alpine main ridge, which separates 18 north-facing glaciers from 14 south-facing glaciers (1850). By 2009 these numbers decreased to 12 glaciers on the northern and 5 on the southern side.

Figure 1 (see corresponding map) gives a short glimpse of the impressive glacier area loss of Goldberggruppe. Compared to 1850, almost 77 % of the total glacier area was lost by 2009. In absolute numbers, the overall glacier area decreased from 34.19 km<sup>2</sup> (1850) to 7.91 km<sup>2</sup> (2009). South of the Alpine main ridge, 19% of the 1850 glacier extent was still left in 2009 and 25% of the glacierized terrain north of the main ridge (see Table 5.1).

In order to compare the rate of glacier retreat between the two main aspects of Goldberggruppe, mean annual area changes were calculated. In this way, mean relative annual changes (in %) were determined with respect to the earlier extent of the specific period (i.e. for changes between 1969 and 1998, 100% equals the area in 1969).

From 1998 to 2009 annual rates of area change were the highest for all periods (about -1.7% per year). That was also the only period for which the rate of the north-facing glaciers exceeded the rate of the south-facing ones. In all other periods the south-facing glaciers diminished faster, particularly from 1850 to 1931 and 1969 to 1998. The smallest rate of area loss was found for both the north-facing and the south-facing glaciers during the earliest period 1850–1931 (-0.29% y<sup>-1</sup> and -0.64% y<sup>-1</sup>). The mean annual area change for all glaciers during the entire period 1850–2009 was -0.48% y<sup>-1</sup>.

Plots of the data are illustrated in the appended map.

Table 5.1 Characteristic numbers for glacier area changes of Goldberggruppe

| Code | Location | Glacier Name | Area [10 <sup>3</sup> m <sup>2</sup> ] |      |      |      |      | Area change (rel. to 1850) [%] |      |      |      |
|------|----------|--------------|--|------|------|------|------|--------------------------------|------|------|------|
|      |          |              | 1850                                   | 1931 | 1969 | 1998 | 2009 | 1931                           | 1969 | 1998 | 2009 |
| N1   | N        | No name      | 512                                    | 120  | 121  | 67   | 38   | -77                            | -76  | -87  | -93  |
| N2   | N        | Weißbachkees | 3142                                   | 1989 | 1243 | 866  | 523  | -37                            | -60  | -72  | -83  |
| N3   | N        | No name      | 590                                    | 252  | 220  | 207  | 156  | -57                            | -63  | -65  | -74  |
| N4   | N        | Krummlkees   | 2031                                   | 1321 | 1143 | 898  | 622  | -35                            | -44  | -56  | -69  |
| N5   | N        | No name      | 148                                    | 0    | 0    | 0    | 0    | -100                           | -100 | -100 | -100 |
| N6   | N        | No name      | 1016                                   | 334  | 146  | 114  | 75   | -67                            | -86  | -89  | -93  |

Table 5.1 continued

| Code                            | Location | Glacier Name                                      | Area [10 <sup>3</sup> m <sup>2</sup> ] |      |      |      |      | Area change (rel. to 1850) [%] |       |       |       |
|---------------------------------|----------|---|--|------|------|------|------|--------------------------------|-------|-------|-------|
|                                 |          |   | 1850                                   | 1931 | 1969 | 1998 | 2009 | 1931                           | 1969  | 1998  | 2009  |
| N7                              | N        | No name   | 216                                    | 131  | 0    | 0    | 0    | -39                            | -100  | -100  | -100  |
| N8                              | N        | Hocharnkees + Pilatuskees                         | 3141                                   | 2187 | 1600 | 1546 | 1363 | -30                            | -49   | -51   | -57   |
| N9                              | N        | No name   | 52                                     | 27   | 0    | 0    | 0    | -48                            | -100  | -100  | -100  |
| N10                             | N        | Goldbergkees + dead ice,<br>Kleines Sonnblickkees | 4104                                   | 2827 | 1929 | 1656 | 1474 | -31                            | -53   | -60   | -64   |
| N11                             | N        | No name   | 289                                    | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| N12                             | N        | Schareckkees                                      | 1851                                   | 1003 | 1020 | 600  | 491  | -46                            | -45   | -68   | -73   |
| N13                             | N        | No name   | 247                                    | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| N14                             | N        | No name   | 546                                    | 101  | 53   | 35   | 41   | -82                            | -90   | -94   | -92   |
| N15                             | N        | Schlapperebenkees                                 | 1628                                   | 1230 | 917  | 759  | 619  | -24                            | -44   | -53   | -62   |
| N16                             | N        | Sparangerkees                                     | 1362                                   | 360  | 250  | 167  | 143  | -74                            | -82   | -88   | -90   |
| N17                             | N        | No name   | 1232                                   | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| N18                             | N        | No name   | 303                                    | 207  | 182  | 99   | 115  | -32                            | -40   | -67   | -62   |
| S1                              | S        | No name   | 360                                    | 49   | 0    | 0    | 0    | -86                            | -100  | -100  | -100  |
| S2                              | S        | Großes Fleißkees                                  | 1633                                   | 392  | 397  | 347  | 273  | -76                            | -76   | -79   | -83   |
| S3                              | S        | Goldzechkees                                      | 907                                    | 267  | 155  | 113  | 102  | -71                            | -83   | -88   | -89   |
| S4                              | S        | Kleinfließkees                                    | 2080                                   | 1600 | 1266 | 958  | 831  | -23                            | -39   | -54   | -60   |
| S5                              | S        | No name   | 204                                    | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| S6                              | S        | No name   | 119                                    | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| S7                              | S        | Zirknitzkees                                      | 865                                    | 48   | 103  | 108  | 89   | -94                            | -88   | -88   | -90   |
| S8                              | S        | Wurtenkees + dead ice                             | 3587                                   | 322  | 2129 | 1174 | 917  | -91                            | -41   | -67   | -74   |
| S9                              | S        | Kleines Zirknitzkees                              | 355                                    | 29   | 0    | 0    | 0    | -92                            | -100  | -100  | -100  |
| S10                             | S        | No name   | 266                                    | 28   | 0    | 0    | 0    | -89                            | -100  | -100  | -100  |
| S11                             | S        | No name   | 52                                     | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| S12                             | S        | No name   | 407                                    | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| S13                             | S        | No name   | 314                                    | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| S14                             | S        | No name   | 631                                    | 0    | 0    | 0    | 0    | -100                           | -100  | -100  | -100  |
| All glaciers [km <sup>2</sup> ] |          |   | 34.2                                   | 17.7 | 12.9 | 9.7  | 7.9  | -48.2                          | -62.3 | -71.6 | -76.9 |



## THE STEREO-PHOTOGRAMMETRIC MAP OF GOLDBERGKEES, 1909, HOHE TAUERN, AUSTRIA (1:10,000)

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Reprint of the original map published by the Sonnblickverein in 1911: Die stereophotogrammetrische Aufnahme des Goldberggletschers im August des Jahres 1909. In: Neunzehnter Jahresbericht des Sonnblickvereins für das Jahr 1910, Vol. 19. Wien: Selbstverlag des Sonnblickvereins.

Goldbergkees (also known as Vogelmaier-Ochsenkar-Kees or Goldberggletscher), adjacent to the meteorological observatory (built in 1886) on top of Hoher Sonnblick (3,105 m a.s.l.), has been the focus of scientific research since the late 19<sup>th</sup> century.

This particular map of Goldbergkees, drawn in August 1909, can be seen as a milestone in the development of cartography and alpine glaciology. It was the first time that a brand new method – the terrestrial stereo-photogrammetry – was implemented to map a glacier with a yet unknown speed and accuracy (Böhm et al. 2011).

In 1904 the *Imperial Academy of Science* in Vienna, Austria decided to fund the mapping of Goldbergkees at a scale of 1:10,000 to establish “*a fundament to explore the impact of climatic conditions on changes in the Goldberggletscher*”. The *Sonnblickverein*, owner and sustainer of the Sonnblick Observatory, commissioned Artur Freiherr von Hübl, *Generalmajor* of the Austro-Hungarian Empire who already had gained some reputation for his 1899/1900 photogrammetric surveying of the Karls-Eisfeld, a glacier of the Dachstein massive, with the task of making this map. The stereo-photogrammetric map of the Goldbergkees subsequently became the most accurate basis for various glaciological studies in the Sonnblick area for many decades. The fieldwork was carried out during the summer of 1909 by Karl Wollen under the guidance of Artur Freiherr von Hübl. In the following winter this beautiful little piece of art was completed.

Photogrammetric surveying as the method for mapping the Goldbergkees was chosen in the first place because it was understood that a direct surveying using plane table and tachymeter was unfeasible due to “*mostly bad weather*” and the poor accessibility of the glacier, as well as the lack of natural objects to use as measurement markers for the positioning on the plane.

Only few years earlier, Dr. Carl Pulfrich, a German physicist, had developed the first stereo comparator for the Carl Zeiss Company in Jena, Germany. Artur Freiherr von Hübl soon realized its compatibility for photogrammetric glacier surveying, adapted the procedure and the first terrestrial stereo-photogrammetric surveying of a glacier ever was carried out – the 1909 map of Goldbergkees.

The trigonometric ground control points were defined by the 1<sup>st</sup> and 2<sup>nd</sup> order triangulation of the Austrian Military Institute in the year 1906. In doing so the surveying network was consolidated around the glacier in order to facilitate the forthcoming photogrammetric surveying.

For map construction Karl Wollen and his associates used, besides the control points, another 1200 detail points. The differences generated by the determination of terrain points from different survey points lead to a mean horizontal accuracy of  $\pm 3$  m. The mean elevation error was specified as  $\pm 0.3$  m. The equidistance on rocky areas is 100 m, on the glacier 20 m and on more gentle slopes 10 m.

Goldbergkees was predestined for stereo-photogrammetric surveying because of a 2,800 m high ridge between the summits of Neuner Kogel and Herzog Ernst that afforded an overview of the entire glacier. On that ridge the most important camera station for the surveying was established. Today it still serves as a photo-point to observe the glacier retreat in its full areal dimension. To catch all the topographic details another 9 photo-points around Goldbergkees were established. The summit of Hoher Sonnblick (3,105 m a.s.l.) served as a control point, from which 3 photos were taken consecutively at an angle of  $45^\circ$  to each other, to check the correct position of terrain points. The camera used had a focal length of 245 mm. To measure the angles, a small theodolite was placed on the camera tripod.

The final product – originally published by the Sonnblickverein in 1911 – is that stunning historic map of Goldbergkees, the first stereo-photogrammetric map of a glacier ever made and a small work of art in itself.

## URUMQI GLACIER NO. 1, 1962–2006, CHINA

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Urumqi Glacier No.1, located in the eastern Tianshan, at the core area of central Asia, is considered to be the best-monitored glacier in China. Observations of the glacier were initiated in 1959, implemented by the Tianshan Glaciological Station, Chinese Academy of Sciences (CAS) (Li et al. 2003). The photograph shown in this map was taken by Li Zhongqin in 2007, indicating that Urumqi Glacier No.1 is a northeast-facing valley glacier with two branches, East Branch and West Branch, which were separated in 1993.

The map shows the changes in Urumqi Glacier No.1 from 1962 to 2006. The glacier boundary and contours of 1962 and 2006 are determined by ground survey using plane table and a total station, respectively; elevation errors are estimated to be  $\pm 0.1$  m after accounting for the instruments' settings and the network of total station benchmarks. Contour lines on the glacier are at 25 m intervals, with the area retreated displayed in yellow. The map is presented in a Universal Transverse Mercator (UTM) coordinate system referenced to the World Geodetic System of 1984 (WGS84).

Since the 1950s, independent campaigns measuring ice thickness have been carried out systematically three times on the glacier (Li et al. 2012; Wang et al. 2011). The ice thickness shown in this map was obtained in 2006 by the pulse EKKO 100A enhancement radar system, made by Sensors and Software Inc., Mississauga, Canada, which had a reported uncertainty of less than 2% (Sun et al. 2003). Two longitudinal profiles and sixteen transversal profiles were established (one longitudinal profile and eight transversal profiles in the East Branch; others in the West Branch). In all cases a velocity of  $169 \text{ m } \mu\text{s}^{-1}$  (Kovacs et al. 1995) was used. The interpolation algorithm was then used to determine the ice thickness distribution.

## BAVARIAN GLACIERS 1989/90–2006/07 (1:5,000)

(5 Glaciological Maps)

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The maps show the areal extent and the contour lines of the five existing glaciers in the Bavarian Alps, covering different time periods: Nördlicher Schneeferner 1999–2006 (Map 1), Südlicher Schneeferner 1999–2006 (Map 2), Höllentalferner 1999–2006 (Map 3), Blau eis 1989–2007 (Map 4), and Watzmann gletscher 1989–2007 (Map 5). Except for Höllentalferner, the ice thicknesses derived by radio echo sounding are also displayed. The three “-ferners” are located around Zugspitze in the Wetterstein group, whereas Blau eis and Watzmann gletscher are situated in the Berchtesgaden Alps.

Aerial images from the Bavarian State Office for Surveying and Geoinformation (LVG) in 1989 and 1999 were analyzed by photogrammetric processing on a ZEISS Planicomp P1 and subsequently digital elevation models (DEM) were generated using the HIFI software (Ebner et al. 1980). The images from Zugspitze, taken on 15 September 1999, showed almost snow-free glacier surfaces with good contrast. The Berchtesgaden Alps were captured on 5 July 1999, when both glaciers were still snow-covered. We assessed the thickness of the snow pack by comparing the elevations of flat rock areas between the 1989 and the 1999 stereo models. The results of 2 m for Blau eis and 2.5 m for Watzmann gletscher were subtracted from the glacierized area of the 1999 DEM, which was then regarded as the 1998 autumn surface. Since the snow cover in the Berchtesgaden Alps did not allow glacier boundaries to be detected, those from the previous survey in 1989 are included in maps 4 and 5.

An airborne laser scanning survey of the Wetterstein group was conducted by the LVG on several flight profiles during the first half of November 2006. According to snow observations of the skiing resort, a constant value of 0.75 m was subtracted from the original elevation. Recent glacier outlines have been retrieved from digital orthoimages taken in June 2006 by LVG.

While taking into consideration the scale of the images and local conditions on Bavarian glaciers, Finsterwalder and Rentsch (1973) estimated the mean vertical error of terrestrial and airborne photogrammetry to be within a range of few decimeters. The maximum error is 1 m (H. Rentsch, pers. comm. 2003). The accuracy of airborne laser scanning was tested by differential GPS profiling on Engabreen in Norway, where mean discrepancies of  $0.1 \pm 0.1$  m standard deviation were observed (Geist et al. 2005).

The parallel shifts in the contour lines outside the glacierized areas in maps 4 and 5 are artefacts from the reprojection of the 1999 elevation model from Gauss-Krüger into UTM coordinates.

In November 2006 (Nördlicher and Südlicher Schneeferner) and October 2007 (Watzmanngletscher and Blaueis), ice thicknesses were determined using a ground-penetrating radar system (GPR) with 200 MHz antennas. To locate the profiles, kinematic GPS tracking using a differential system was carried out. On the radargrams, the bedrock could for the most part be identified clearly. To convert time into depth, a mean radar wave velocity of  $0.15 \text{ m ns}^{-1}$  was assumed. In a Geographic Information System, point shapefiles containing ice thicknesses along the profiles have been created and the glacier outlines were determined on the 2006 orthoimages by LVG. In glacier parts without information on ice depth, some reasonable thickness estimates have been introduced, e.g. by extrapolating slopes of ice free surroundings, to avoid linear gradients and to create a concave shape of the bedrock. All points were then interpolated into a raster, using a spline function.

From 1989/90 to 2006/2007, all glaciers reduced their areal extent. The strongest relative reduction of -44 % was observed on Watzmanngletscher, which has lost all its protuberances and is restricted to its most central part (see Map 5). Given the fact that this glacier was considered as diminished in the 1940s and that it showed the largest mass and area gains from 1960 to 1980, Watzmanngletscher seems to be the most sensitive and vulnerable to climate fluctuations of all Bavarian glaciers. The changes in area, thickness and volume for the periods 1989/90 to 1998/99 and for 1999 to 2006 were presented by Hagg et al. (2008). Changes versus altitude for 20 m elevation bands can be found on [www.bayerische-gletscher.de](http://www.bayerische-gletscher.de).

Nördlicher Schneeferner is by far the thickest glacier according to the radio sounding data, its maximum depth reaches approximately 50 m. The radio sounding of Höllentalferner yielded no results during the 2006 field campaign. A new survey showed that it has a maximum thickness comparable to Nördlicher Schneeferner, but a significantly lower mean thickness and volume (Hagg et al. 2012).

The work was funded by the German Research Foundation (DFG project HA5061/1–1) and supported by the Bavarian Academy of Sciences and Humanities. Sebastian Rudolph and Astrid Lambrecht greatly supported the radar field campaigns. The University of Greifswald (Prof. Sixten Bussemer and Dr. Grit Büttner) and the AWI Bremerhaven (Andreas Frenzel) supplied radar equipment. The Bayerische Zugspitzbahn AG and the National Park Office in Berchtesgaden offered logistic help.

## LEWIS GLACIER, MOUNT KENYA, 2010 (1:2,500)

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The map presents the glacier surface topography, the ice thickness, the glacier areal change since 2004, and the network of ablation stakes including an automatic weather station as the baseline for ongoing glaciological field studies on Lewis Glacier, Mount Kenya. Lewis Glacier (0°9' S, 37°18' E) is amongst the best-documented tropical glaciers and this work serves as a continuation of monitoring one of the few tropical reference glaciers. Surveying was accomplished on 2 and 3 March 2010. The glacier margin and numerous transects of the glacier surface were surveyed using differential global positioning receivers (Trimble Pathfinder ProXH and ProXT rovers and a second ProXH as a local base station with external Zephyr antennas). Glacier surface topography was interpolated to a digital elevation model with 5 m grid point spacing. Ice thickness was measured at the same dates with ground-penetrating radar at a central frequency of 6.4 MHz. Refer to Prinz et al. (2011) for information about the ice thickness measurement, its accuracy and ice volume changes since 1934. Full documentation of the map is contained in Prinz et al. (2012). Surface mass balance measurements for 2010/2011 and 2011/2012 are reported as -1.54 m w.e. and -1.03 m w.e., respectively. These values are as negative as the minima measured between 1978 and 1996, and show a strong dependence on duration and depth of snow cover, which cause an impact on accumulation as mass input and ablation via the surface albedo. From 1934 to 2010, Lewis Glacier lost 90% of its volume and 79% of its area, with the highest rates of ice volume loss occurring around the turn of the century (Prinz et al. 2012).

# TOPOGRAPHIC CHANGE OF FINDELENGLETSCHER, VALAIS, SWITZERLAND, 2005–2010 (1:15,000)

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In 2004, Findelengletscher (and its former tributary Adlergletscher) in the Canton of Valais, Switzerland, were chosen as a validation site for a research project (Machguth et al. 2006a, 2006b). For this purpose, a network of stakes and snow pits was installed to derive the mass balance with the direct glaciological method for both glaciers. Based on this preparatory work, it was decided to continue the mass balance measurements on Findelengletscher to add an additional glacier to the Swiss Glacier Monitoring Network (Glaciological Reports 1881–2010). Today, the mass balance network is maintained jointly by the Department of Geosciences, University of Fribourg, and the Department of Geography, University of Zurich.

Following the decision to maintain use of the traditional measurements, the need arose for verification and calibration based on a geodetic method arose. We decided to use data from airborne laser scanning (ALS), as this method has repeatedly demonstrated its ability to provide accurate topographic information on glaciers (e.g., Favey et al. 1999, Geist 2005). The annex map shows the elevation change in the period between October 2005 and September 2010. To enhance the visual information content in the accumulation area and at values close to zero meters change, the color bar changes to a finer scale. The map uses the Swiss grid coordinate system (CH1903) and levelled heights (LN02). Therefore, the map shows a kilometer grid and elevations are meters above sea level. The raster resolution of the map information is 1 by 1 m, the background map shows the shaded relief of 2005 in the same spatial resolution.

In the period covered, Findelengletscher lost c. 2% of its area (to 13.03 km<sup>2</sup> in 2010) and the corresponding length change at the tongue was about -200 m. The average thickness change was -1.76 m for Adlergletscher and -3.18 m (-0.64 m y<sup>-1</sup>) for Findelengletscher with maximum ice losses of up to -35 m close to the terminus. Only few regions with increased elevation are present in the map, many caused by the downvalley flow of crevasses, altering the elevation values locally but not increasing the glacier volume.

In Joerg et al. (2012), the accuracy of the ALS method in preparation of the comparison to the direct measurements is assessed: Assuming a density of  $850 \pm 60 \text{ kg m}^{-3}$ , the observed thickness change results in a geodetic mass balance of  $-2.70 \pm 0.19 \text{ m w.e.}$  for the five year period covered. This is more negative than the glaciological balance for the corresponding period ( $-2.07 \text{ m w.e.}$ ) and shows the need for a re-analysis of the mass balance series.

We express our appreciation to the Findelengletscher teams of the Universities of Fribourg and Zurich for great cooperation during fieldwork. Thanks are due to BSF Swiss-photo for the acquisition of the airborne laser scanning data and the continuous collaboration. The project *Glacier Laser Scanning Experiment Oberwallis* was supported by the Swiss energy company Axpo.





## CHAPTER 6 THE GLOBAL TERRESTRIAL NETWORK FOR GLACIERS (GTN-G)

The series of *World Climate Conferences*, organized by the WMO, can be regarded as a starting point for putting the climate change issue on the political agenda. The first conference was held in 1979 in Geneva, Switzerland, and was one of the first major international meetings on climate change. This mainly scientific conference led to the establishment of WMO's *World Climate Program* (WCP) and *World Climate Research Program* (WCRP), and to the creation of the IPCC by WMO and UNEP in 1988 (UN 1988). The *Second World Climate Conference* in 1990 called for the urgent establishment of a coordinated climate system monitoring. As a consequence, the *Global Climate Observing System* (GCOS) and the *Global Terrestrial Observing System* (GTOS) were established in 1992 and 1996, respectively, under the auspices of FAO, ICSU, UNEP, UNESCO, and WMO. Within GCOS/GTOS the *Terrestrial Observation Panel for Climate* (TOPC) was created to design a global observing strategy and set in place a *Global Terrestrial Network* (GTN) for all *Essential Climate Variables* (ECV) in the terrestrial domain in support of the *United Nations Framework Convention on Climate Change* (UNFCCC). The GTN is a system of networks that provides an umbrella for existing and operational monitoring services. It aims to facilitate the exchange of information and address issues such as data access and availability as well as the standardization of measurement methods. The third, and so far latest, *World Climate Conference* was held in Geneva in 2009, and proposed the establishment of a *Global Framework for Climate Services* to develop an interface between the providers and users of climate services (WMO 2009).

In close collaboration with the *US National Snow and Ice Data Center* in Boulder (NSIDC) and the *Global Land Ice Measurements from Space* (GLIMS) initiative, the WGMS has been in charge of the GTN-G since its creation in 1998 (Haeberli et al. 2000). The GTN-G monitoring strategy is designed to provide quantitative and comprehensive information in connection with questions about process understanding, change detection, model validation and environmental impacts in an interdisciplinary knowledge transfer to the scientific community as well as to policymakers, the media and the public. In order to link scientific process studies on the one hand with global coverage by satellite imagery and digital terrain information on the other, GTN-G follows an integrative and multi-level strategy (cf. Haeberli 1998, 2004) that provides observations at the following levels:

- extensive glacier mass balance and flow studies within major climatic zones for improved process understanding and calibration of numerical models;
- determination of glacier mass balance using cost-saving methodologies within major mountain systems in order to assess the regional variability;
- long-term observations of glacier length changes and remotely sensed volume changes for large glacier samples within major mountain ranges for assessing the representativeness of mass balance measurements;
- glacier inventories repeated at time intervals of a few decades by using remotely sensed data.

This multi-level monitoring system across environmental gradients provides the basic datasets required for integrative studies and assessments of the distribution and changes in glaciers and ice caps by combining in-situ, remote sensing, and numerical modeling components.

Since its creation in 1998, the GTN-G has been run by the WGMS in a rather informal cooperation with NSIDC and GLIMS (Haeberli personal comm., Barry 1998). Among the three bodies, key expertise for in-situ measurements is generally in the domain of the WGMS, while GLIMS and NSIDC have focused mainly on remote sensing and data management of glaciers, respectively. In 2008, a *Memorandum of Understanding* was drawn up between the WGMS and NSIDC regarding cooperation in the exchange and distribution of glacier data and standards, and interoperability between the two data archives (Haeberli and Barry, 2008). One of the specific tasks was to establish a common *GTN-G Steering Committee* to support and advise the two organizations in scientific questions of overall importance concerning the monitoring of glaciers and ice caps. In the same year, the WGMS submitted an official proposal for the establishment of a *Steering Committee for the GTN-G* and included supporting letters on behalf of NSIDC and GLIMS to the *IACS Bureau* (Zemp and Haeberli, 2008). The *GTN-G Steering Committee* was approved in 2009 by the *IACS Bureau* and consists of:

- an *Executive Board* that is responsible for (i) developing and implementing the international observation strategy for glaciers and ice caps, (ii) providing standards for the monitoring of glacier fluctuations (e.g., length change, mass balance) and inventories, and (iii) compiling and distributing such information in a standardized form.
- an *Advisory Board* under the leadership of the IACS that will (i) support, (ii) consult, and (iii) periodically evaluate the work of the *Executive Board* and its three operational bodies regarding the monitoring of glaciers and ice caps.

The continuity of GTN-G can be guaranteed – at moderate staffing level – through the three operational bodies (i.e. WGMS, NSIDC, and GLIMS). Its ultimate success, however, depends on the glacier monitoring efforts from research projects and the scientific community as well as on their willingness to share data and results. Since the publication of the last FoG volume, major contributions to GTN-G have been made by the *European Space Agency* funded GlobGlacier project (2007-2010; cf. Chapter 7 in WGMS 2008) and its follow-up project the *Glaciers\_cci* (2010-2013, Paul et al. 2012), by the ice2sea project within the *Seventh Framework Program for Research of the European Commission* (e.g., Rastner et al. 2012), as well as by efforts from within the glacier research community towards a complete world glacier inventory (Cogley 2008, Arendt et al. 2012).

More detailed information about GTN-G is found in Zemp (2012) and on the GTN-G website: <http://www.gtn-g.org>.

The principal aim of the FoG series is to compile and disseminate observational data in order to quantify changes in glacier extent, volume and mass. The centennial retreat of glaciers from the moraines and trimlines, formed during the *Little Ice Age* advances, is found in mountain ranges all over the world. It is a clear indicator of global climate changes as can be seen from annual front variation measurements and reconstructions as well as on aerial photographs and satellite images. From the available front variation series, 90% are reported to have retreated over the reporting period with absolute cumulative values between several decameters to a few hundred meters.

The second five-year period (2005/06–2009/10) of the 21<sup>st</sup> century is once more dominated by results from melting glaciers around the globe. The 37 ‘reference’ glaciers with long-term glaciological mass balance series in ten mountain ranges (cf. Zemp et al. 2009, WGMS 2011) show average mass balances between  $-0.5 \text{ m w.e. a}^{-1}$  (in 2008) and  $-1.2 \text{ m w.e. a}^{-1}$  (in 2006). The corresponding pentadal average of  $-0.75 \text{ m w.e. a}^{-1}$  is about the same as in the previous pentad (2000/01–2004/05). Comparing these two periods together with earlier results shows a doubling of the decadal mass loss rates since the 1970s. The mean of these 37 long-term series is influenced by the large proportion of Alpine and Scandinavian glaciers. However, in general trend and magnitude, these results are in good agreement with the results from other regional and moving-sample averaging of all available data from roughly 300 glaciers (cf. Kaser et al. 2006, Zemp et al. 2009, WGMS 2011). Also, the results of the direct glaciological method are comparable with the pentadal average thickness loss of the geodetic measurements ( $-0.85 \text{ m ice a}^{-1}$ ) which are available for 56 glaciers for the reporting period. For the 37 ‘reference’ glaciers, the percentage of positive mass balances decreased from 33% in the 1980s, to 26% in the 1990s, to 20% in the past decade. This indicates that glacier mass loss not only becomes faster but also more spatially uniform. Further analysis requires detailed consideration of characteristic aspects such as glacier sensitivity and feedback mechanisms. The cumulative mass budgets reported for individual glaciers not only reflect regional climatic variability, but also marked differences in the sensitivity of the observed glaciers.

With the dynamic response of glaciers to changes in climatic conditions – growth/reduction in area mainly through the advance/retreat of glacier tongues – glaciers readjust to equilibrium conditions of ice geometry with a zero mass balance. Recorded mass balances document the degree of imbalance between glaciers and climate due to the delay in dynamic response caused by the characteristics of ice flow (deformation and sliding); over longer time intervals they depend on the rate of climatic forcing. With constant climatic conditions (no forcing), balances would tend towards and finally become zero. Long-term non-zero balances are, therefore, an expression of ongoing climate change and sustained forcing. Trends towards increasing non-zero balances are caused by accelerated forcing. In the same way, comparison between present-day and past values of mass balance must take the changes of glacier area into account, which have occurred in the meantime (Elsberg et al. 2001, Huss et al. 2012). Many of the relatively small glaciers, measured within the framework of the present mass balance observation network, have lost large percentages of their area during the past decades. The recent increase in the rates of ice loss over diminishing glacier surface areas, as compared with earlier losses related to larger surface areas, becomes even more pronounced and leaves no doubt about the ac-

celerating change in climatic conditions, even if a part of the observed acceleration trend is likely to be caused by positive feedback processes.

The glacier data and information compiled and disseminated through the WGMS are widely used. The WGMS website registers a few thousand visits per month and the WGMS staff deals with about 200 user requests per year. In addition, most of the key publications about recent regional (e.g., Bolch et al. 2012) or global (e.g., Cogley 2009, Zemp et al. 2009, Dyurgerov 2010, Ohmura 2011) glacier changes and related secondary impacts, such as on global sea level rise (e.g., Kaser et al. 2006, Raper and Braithwaite 2006, Meier et al. 2007, Leclercq et al. 2011, Radić and Hock 2011) or regional run-off changes (e.g., Casassa et al. 2009, Sorg et al. 2012), are using data provided by WGMS. In order to reflect and improve its strategy and work, the WGMS periodically undergoes evaluation by its scientific auspice organizations (cf. IACS/IUGG 2006, WDS/ICSU 2012) and organizes decadal meetings with its National Correspondents (cf. WGMS 1998, 2010).

The latest *WGMS General Assembly* was held in September 2010 at Riffelberg Zermatt, and brought together the staff members of the central service, National Correspondents or their deputies representing 28 countries of its worldwide scientific collaboration network, as well as special guests from the GLIMS community, NVE, ESA, and from GCOS Switzerland. Besides the strengthening of the personal contacts within this network, the main goals of the meeting were to present and discuss (i) the international organization, its strategy, and datasets of the *Global Terrestrial Network for Glaciers*, (ii) its implementation in the participating countries, (iii) the current status and challenges of glacier monitoring, (iv) measures to improve our service to the community, and (v) the definition of key tasks for the glacier monitoring of the coming decade (WGMS 2010, Zemp et al. 2011a). Based on the global and national overviews presented and on the discussion during the different workshops, the following key tasks for glacier monitoring of the coming decade have been developed. They are to:

- Improve the organizational structure and funding situation of the national monitoring programs through WGMS network collaborations and contacts to international organizations,
- use the WGMS network for capacity building,
- adjust monitoring strategies for disintegrating and vanishing glaciers,
- strongly facilitate homogenization, validation, and calibration of long-term mass balance series,
- strengthen integration of and improve cooperation between in-situ and remote sensing communities investigating glaciers,
- initiate (small) scientific workshops focused on specific monitoring-related aspects, and
- improve the visibility of WGMS datasets.

Over the past two years, several projects have been launched by or with contributions from the WGMS in order to tackle these tasks. As such, the WGMS (i) jointly with

NSIDC updated and revised the World Glacier Inventory (WGMS and NSIDC 1989, updated 2012), (ii) contributed to the new glossary of glacier mass balance and related terms (Cogley et al. 2011), (iii) wrote letters of support for glacier mass balance programs (e.g. at Bahia del Diablo, AQ; Stubacher Sonnblickkees, AT; Freya, GL; Storglaciären, SE; Wolverine, Gulkana and South Cascade, USA), (iv) revived the mass balance measurements at Abramov Glacier, KG, and fostered new geodetic surveys at Nevado Santa Isabel, CO, and Antizana, EC, within the Capacity Building and Twinning for Climate Observing System project which is led by MeteoSwiss and funded by the Swiss Agency for Development and Cooperation, and (v) held a workshop on measurement and uncertainty assessment of glacier mass balance at Stockholm University, Tarfala Research Station, Sweden (Nussbaumer et al. 2012).

While the main focus for the WGMS will remain on the monitoring of glacier changes in length, area, volume, and mass, there are related issues to be addressed such the generic differences between the glaciological and the geodetic balance (cf. Cogley et al. 2011) as well as the re-analysis of glacier mass balance series (e.g., Thibert et al. 2008, Huss et al. 2009, Zemp et al. 2010), the extension of the limited in-situ dataset using remote sensing (e.g., Arendt et al. 2008, Rabatel et al. 2008, Bolch et al. 2012) and modelling studies (e.g., Huss 2012, Marzeion et al. 2012), and the integration of firn temperature monitoring (e.g., Vincent et al. 2007, Hoelzle et al. 2011) or of glacier calving activities (Benn et al. 2007).

The present FoG volume marks the latest milestone in more than a century of internationally coordinated glacier monitoring. It continues the well-established tradition of building up a strong data basis for scientific assessments of global glacier changes and related impacts, and solidly documents the joint efforts to improve and extend the long-term monitoring of an essential climate variable. At the same time, increasing data streams from satellite remote sensing open new opportunities for the monitoring of glacier changes over large regions or even globally (e.g., Gardner et al. 2011, Jacob et al. 2012, Kääb et al. 2012) as well as new challenges such as due to limited spatial resolution (e.g., Jacob et al. 2012), limited spatial integration (e.g., Kääb et al. 2012), and due to the lack of operational capacities for required processing and analysing. In a research environment with limited funding for long-term monitoring, joint efforts by the operational bodies, their partners, and the scientific community continue to be needed in order to face the challenges of the 21<sup>st</sup> century.

Special thanks are extended to all those who have helped over many decades to build up this database which, despite its limitations, nevertheless remains an indispensable treasury of international snow and ice research, readily available to the scientific community as well as to a vast public.



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## APPENDIX    **NOTES ON THE COMPLETION OF THE DATA SHEETS**

This appendix includes the explanatory notes on the completion of the Excel-based data submission forms, sent out with the calls-for-data for the observation period 2005–2010 (also valid for Addenda from earlier years):

- Notes on the completion of the data sheet “A GENERAL INFORMATION”
- Notes on the completion of the data sheet “B STATE”
- Notes on the completion of the data sheet “C FRONT VARIATION”
- Notes on the completion of the data sheet “D CHANGE”
- Notes on the completion of the data sheet “E MASS BALANCE OVERVIEW”
- Notes on the completion of the data sheet “EE MASS BALANCE”
- Notes on the completion of the data sheet “EEE MASS BALANCE POINT”
- Notes on the completion of the data sheet “F SPECIAL EVENT”

The notes on the completion of the data sheets A–F describe all attributes compiled during the call-for-data, whereas the Tables A, B, BB, C, CC, CCC and D in this Volume provide a summary of the collected data. The presentation of the data and the corresponding fields are consistent with the Volume IX of the *Fluctuations of Glaciers* series.

The WGMS website provides access to information on available data, to procedures for data order and data submission as well as to the addresses of national correspondents. The website can be accessed via:

<http://www.wgms.ch>

## A - GENERAL INFORMATION

### NOTES ON THE COMPLETION OF THE DATA SHEET

#### A1 - POLITICAL UNIT [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (for 2 digit abbreviations, see ISO 3166 country code, available at [www.iso.org](http://www.iso.org)).

Political unit is part of WGI key (positions 1 and 2).

Political unit is part of FoG and MBB key (positions 1 and 2).

#### A2 - GLACIER NAME [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters.

Format: max. 30 column positions.

If necessary, the name can be abbreviated; in this case, please give the full name under "A16 - REMARKS".

#### A3 - WGMS ID [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database.

For new glacier entries, this key is assigned by the WGMS.

#### A4 - HYDROLOGICAL CATCHMENT AREA [alpha-numeric code; 5 digits]

Part of WGI key: Position 3 denotes the continent. Positions 4 to 7 denote the drainage basin; cf. Müller (1978).

#### A5 - FREE POSITION [alpha-numeric code; 2 digits]

Part of WGI number: Positions 8 and 9 are freely chosen identification numbers; cf. Müller (1978).

#### A6 - LOCAL CODE [alpha-numeric code; 3 digits]

Part of WGI number: Positions 10 to 12; cf. Müller (1978).

#### A7 - LOCAL PSFG [alpha-numeric code; 5 digits]

The local PSFG number is part of FoG and MBB key (positions 3 to 7).

It consists of 4 or, as an exception, 5 numerical digits. Empty spaces should be filled with the digit 0.

The PSFG key is to be assigned by the National Correspondents of the WGMS in line with existing national glacier inventories or similar glacier numerations.

#### A8 - GEOGRAPHICAL LOCATION (GENERAL) [alpha-numeric code; up to 30 digits]

Refers to a large geographical entity (e.g., a large mountain range or large political subdivision) which gives a rough idea of the location of the glacier, without requiring the use of a map or an atlas.

Examples: Western Alps, Southern Norway, Polar Ural, Tien Shan, Himalayas.

#### A9 - GEOGRAPHICAL LOCATION (SPECIFIC) [alpha-numeric code; up to 30 digits]

Refers to a more specific geographical location (e.g., mountain group, drainage basin), which can be found easily on a small-scale map of the country concerned.

Examples: Rhone Basin, Jotunheimen

A10 - LATITUDE [decimal degree North or South; up to 6 digits]

The geographical coordinates should refer to a point in the upper ablation area; for small glaciers, this point may lie outside the glacier.

Latitude should be given in decimal degrees, positive values indicating the northern hemisphere and negative values indicating the southern hemisphere.

Latitude should be given to a maximum precision of 4 decimal places.

A11 - LONGITUDE [decimal degree East or West; up to 7 digits]

The geographical coordinates should refer to a point in the upper ablation area; for small glaciers, this point may lie outside the glacier.

Longitude should be given in decimal degrees, positive values indicating east of zero meridian and negative values indicating west of zero meridian.

Longitude should be given to a maximum precision of 4 decimal places.

A12 - CODE [numeric code; 3 digits]

Classification should be given in coded form, according to “Perennial Ice and Snow Masses” (Technical papers in hydrology, UNESCO/IAHS 1970). The following information should be given:

- Primary Classification                      Digit 1
- Form    Digit 2
- Frontal Characteristics                      Digit 3

A12a - PRIMARY CLASSIFICATION - Digit 1

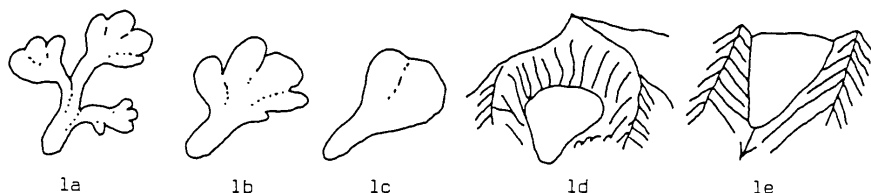
|   |                       |  |
|---|-----------------------|--|
| 0 | Miscellaneous         | Any type not listed below (please explain)   |
| 1 | Continental ice sheet | Inundates areas of continental size  |
| 2 | Icefield              | Ice masses of sheet or blanket type of a thickness that is in sufficient to obscure the subsurface topography          |
| 3 | Ice cap               | Dome-shaped ice masses with radial flow  |
| 4 | Outlet glacier        | Drains an ice sheet, icefield or ice cap, usually of valley glacier form; the catchment area may not be easily defined |
| 5 | Valley glacier        | Flows down a valley; the catchment area is well defined  |
| 6 | Mountain glacier      | Cirque, niche or crater type, hanging glacier; includes ice aprons and groups of small units                           |

- |   |                         |  |
|---|-------------------------|--|
| 7 | Glacieret and snowfield | Small ice masses of indefinite shape in hollows, river beds and on protected slopes, which has developed from snow drifting, avalanching, and/or particularly heavy accumulation in certain years; usually no marked flow pattern is visible; in existence for at least two consecutive years. |
| 8 | Ice shelf               | Floating ice sheet of considerable thickness attached to a coast nourished by a glacier(s); snow accumulation on its surface or bottom freezing  |
| 9 | Rock glacier            | Lava-stream-like debris mass containing ice in several possible forms and moving slowly downslope  |

Note: The parent glacier concept (cf. A15 - PARENT GLACIER) can be used for the classification of complex glacier systems (e.g., ice cap or icefield with outlet glaciers) or of disintegrating/coalescing glaciers over time.

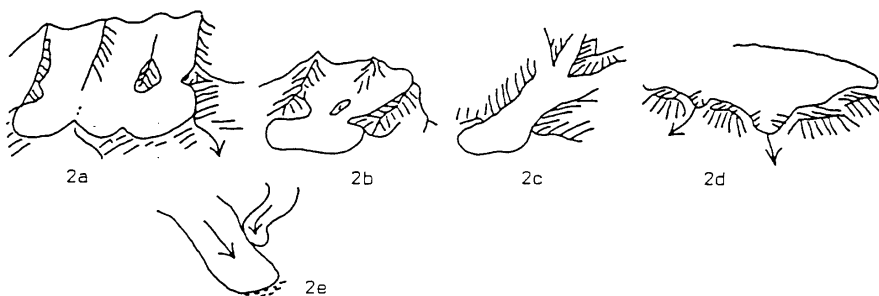
#### A12b - FORM – Digit 2

- |   |                 |  |
|---|-----------------|--|
| 0 | Miscellaneous   | Any type not listed below (please explain)   |
| 1 | Compound basins | Two or more individual valley glaciers issuing from tributary valleys and coalescing (Fig. 1a)   |
| 2 | Compound basin  | Two or more individual accumulation basins feeding one glacier system (Fig. 1b)  |
| 3 | Simple basin    | Single accumulation area (Fig. 1c)   |
| 4 | Cirque          | Occupies a separate, rounded , steep-walled recess which it has formed on a mountain side (Fig. 1d)  |
| 5 | Niche           | Small glacier in a V-shaped gulley or depression on a mountain slope (Fig. 1e); generally more common than genetically further-developed cirque glacier. |
| 6 | Crater          | Occurring in extinct or dormant volcanic craters   |
| 7 | Ice apron       | Irregular, usually thin ice mass which adheres to mountain slope or ridge  |
| 8 | Group           | A number of similar ice masses occurring in close proximity and too small to be assessed individually  |
| 9 | Remnant         | Inactive, usually small ice masses left by a receding glacier  |



#### A12c - FRONTAL CHARACTERISTICS – Digit 3

- |   |   |   |
|---|---|---|
| 0 | Miscellaneous   | Any type not listed below (please explain)  |
| 1 | Piedmont  | Icefield formed on a lowland area by lateral expansion of one or coalescence of several glaciers (Fig. 2a, 2b)  |
| 2 | Expanded foot   | Lobe or fan formed where the lower portion of the glacier leaves the confining wall of a valley and extends on to a less restricted and more level surface (Fig. 2c)  |
| 3 | Lobed   | Part of an ice sheet or ice cap, disqualified as an outlet glacier (Fig. 2d)  |
| 4 | Calving   | Terminus of a glacier sufficiently extending into sea or lake water to produce icebergs; includes – for this inventory – dry land ice calving which would be recognizable from the “lowest glacier elevation” |
| 5 | Coalescing, non-contributing (Fig. 2e)                      |   |
| 6 | Irregular, mainly clean ice (mountain or valley glaciers)   |   |
| 7 | Irregular, debris-covered (mountain or valley glaciers)     |   |
| 8 | Single lobe, mainly clean ice (mountain or valley glaciers) |   |
| 9 | Single lobe, debris-covered (mountain or valley glaciers)   |   |



A13 - EXPOSITION OF ACCUMULATION AREA [cardinal point; up to 2 digits]

The main orientation of the accumulation area using the 8 cardinal points (8-point compass).

A14 - EXPOSITION OF ABLATION AREA [cardinal point; up to 2 digits]

The main orientation of the accumulation area using the 8 cardinal points (8-point compass).

A15 - PARENT GLACIER [numeric code; 5 digits]

Links separated glacier parts with (former) parent glacier, using WGMS ID (see “A2 WGMS ID”).

A16 - REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.



## **B - STATE**

### **NOTES ON THE COMPLETION OF THE DATA SHEET**

This data sheet should be completed in order to report length and elevation range of glaciers with available fluctuation data.

**B1 - POLITICAL UNIT** [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

**B2 - GLACIER NAME** [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

**B3 - WGMS ID** [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database (cf. "A3 - WGMS ID").

**B4 - YEAR** [year]

Year of present survey.

**B5 - MAXIMUM ELEVATION OF GLACIER** [m a.s.l.]

Altitude of the highest point of the glacier.

**B6 - MEDIAN ELEVATION OF GLACIER** [m a.s.l.]

Altitude of the contour line which halves the area of the glacier.

**B7 - MINIMUM ELEVATION OF GLACIER** [m a.s.l.]

Altitude of the lowest point of the glacier.

**B8 - ELEVATION ACCURACY** [m]

Estimated maximum error of reported elevations.

**B9 - LENGTH** [km]

Maximum length of glacier measured along the most important flowline (in horizontal projection).

**B10 - LENGTH ACCURACY** [km]

Estimated maximum error, in length.

**B11 - SURVEY DATE** [numeric; 8 digits]

Date of present survey.

For each survey, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "B15 - REMARKS"

**B12 - SURVEY METHOD** [alphabetic code; 1 digit]

The survey method should be given using the following alphabetic code:

A = Aerial photography

B = Terrestrial photogrammetry

C = Geodetic ground survey (theodolite, tape, etc.)

D = Combination of A, B or C (please explain under "B15 - REMARKS")

E = Other methods (please explain under "B15 - REMARKS")

**B13 - INVESTIGATOR [alpha-numeric]**

Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

**B14 - SPONSORING AGENCY [alpha-numeric]**

Full name, abbreviation and address of the agency where the data are held.

**B15 - REMARKS [alpha-numeric]**

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

## C - FRONT VARIATION

### NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier length change data.

C1 - POLITICAL UNIT [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

C2 - GLACIER NAME [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

C3 - WGMS ID [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database (cf. "A3 - WGMS ID").

C4 - YEAR [year]

Year of present survey.

C5 - FRONT VARIATION [m]

Variation in the position of the glacier front (in horizontal projection) between the previous and present survey.

Positive values: advance

Negative values: retreat

C6 - FRONT VARIATION ACCURACY [m]

Estimated maximum error for front variation.

C7 - QUALITATIVE VARIATION [alphabetic code; 2 digits]

If no quantitative data are available for a particular year, but qualitative data are available, then the front variation should be denoted using the following symbols. They should be positioned to the far left of the data field.

+X : Glacier in advance

-X : Glacier in retreat

ST : Glacier stationary

SN : Glacier front covered by snow, making survey impossible.

Qualitative variations will be understood with reference to the previous survey data, whether this data is qualitative or quantitative.

C8 - SURVEY DATE [numeric; 8 digits]

Date of present survey.

For each survey, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "C13 - REMARKS"

C9 - SURVEY METHOD [alphabetic code; 1 digit]

The survey method should be given using the following alphabetic code:

A = Aerial photography

B = Terrestrial photogrammetry

C = Geodetic ground survey (theodolite, tape etc.)

D = Combination of a, b or c (please explain under "C13 - REMARKS")

E = Other direct methods or reconstructions such as based on historical sources, geomorphological evidence, dating of moraines (please explain under "C13 - REMARKS")

C10 - REFERENCE DATE [numeric, 8 digits]

Date of previous survey

For each survey, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "C13 - REMARKS"

C11 - INVESTIGATOR [alpha-numeric]

Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

C12 - SPONSORING AGENCY [alpha-numeric]

Full name, abbreviation and address of the agency where the data are held.

C13 - REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

## D - CHANGE

### NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report changes in thickness, area and volume from geodetic surveys and/or area data of glaciers with available fluctuation data.

D1 - POLITICAL UNIT [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

D2 - GLACIER NAME [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

D3 - WGMS ID [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database (cf. "A3 - WGMS ID").

D4 - YEAR [year]

Year of present survey.

D5 - LOWER BOUNDARY [m a.s.l.]

Lower boundary of altitude interval.

If refers to entire glacier, then lower bound = 9999.

D6 - UPPER BOUNDARY [m a.s.l.]

Upper boundary of altitude interval.

If refers to entire glacier, then upper bound = 9999.

D7 - AREA SURVEY YEAR[km<sup>2</sup>]

Glacier area of each altitude interval (in horizontal projection) in the survey YEAR.

D8 - AREA CHANGE [1000 m<sup>2</sup>]

Area change for each altitude interval.

D9 - AREA CHANGE ACCURACY [1000 m<sup>2</sup>]

Estimated maximum error for area change.

D10 - THICKNESS CHANGE [mm]

Specific ice thickness change for each altitude interval.

D11 - THICKNESS CHANGE ACCURACY [mm]

Estimated maximum error for thickness change.

D12 - VOLUME CHANGE [1000 m<sup>3</sup>]

Ice volume change for each altitude interval.

D13 - VOLUME CHANGE ACCURACY [1000 m<sup>3</sup>]

Estimated maximum error for volume change.

D14 - SURVEY DATE [numeric; 8 digits]

Date of present survey.

For each survey, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "D19 - REMARKS"

D15 - SURVEY METHOD [alphabetic code; 1 digit]

The survey method should be given using the following alphabetic code:

A = Aerial photography

B = Terrestrial photogrammetry

C = Geodetic ground survey (theodolite, tape etc.)

D = Combination of a, b or c (please explain under "D19 - REMARKS")

E = Other methods (e.g., LIDAR, map comparison; please explain and add at least one reference under "D19 - REMARKS")

D16 - REFERENCE DATE [numeric; 8 digits]

Date of previous survey.

For each survey, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "D19 - REMARKS"

D17 - INVESTIGATOR [alpha-numeric]

Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

D18 - SPONSORING AGENCY [alpha-numeric]

Full name, abbreviation and address of the agency where the data are held.

D19 - REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

## E - MASS BALANCE OVERVIEW

### NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier mass balance data.

E1 - POLITICAL UNIT [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

E2 - GLACIER NAME [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

E3 - WGMS ID [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database (cf. "A3 - WGMS ID").

E4 - YEAR [year]

Year of present survey.

E5 - TIME MEASUREMENT SYSTEM [alphabetic code; 3 digits]

The time measurement system should be given using the following 3 digit alphabetic code:

FLO = floating-date system

FXD = fixed-data system

STR = stratigraphic system

COM = combined system; usually of STR and FXD according to Mayo et al. (1972)

OTH = other

Please give floating survey dates in E6-E8 for all time systems and explain methodological details (e.g., fixed calendar dates and correction methods) under "E22 - REMARKS".

Note that FLO was newly introduced in 2011 in order to reduce earlier ambiguities. Before that, mass balance results based on the floating-date system were (at least theoretically) reported as OTH. For definitions of the above time measurement systems and more details see Cogley et al. (2011).

E6 - BEGINNING OF SURVEY PERIOD [numeric; 8 digits]

Date on which survey period began.

For each survey, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "E22 - REMARKS"

E7 - END OF WINTER SEASON [numeric; 8 digits]

Date of end of winter season.

If known, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “E22 - REMARKS”

E8 - END OF SURVEY PERIOD [numeric; 8 digits]

Date on which survey period ended.

For each survey, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “E22 - REMARKS”

E9a - ELA PREFIX [alphabetic code, 1 digit]

Prefix denoting if the equilibrium line was below (“<”) or above (“>”) the minimum or maximum elevation of the glacier, respectively. Leave this field empty if the mean altitude of the equilibrium line was within the glacier elevation range.

E9b - EQUILIBRIUM LINE ALTITUDE [m a.s.l.]

Mean altitude (averaged over the glacier) of the end-of-mass-balance-year equilibrium line (ELA). Give glacier minimum or maximum elevation if the ELA was below or above the elevation range of the glacier, respectively.

E10 - ELA ACCURACY [m]

Estimated maximum error of ELA.

E11 - MINIMUM NUMBER OF MEAS. SITES USED IN ACCUMULATION AREA [numeric]

The minimum number of different sites at which measurements were taken in the accumulation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only once counted.

E12 - MAXIMUM NUMBER OF MEAS. SITES USED IN ACCUMULATION AREA [numeric]

The maximum number of different sites at which measurements were taken in the accumulation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only once counted.

E13 - MINIMUM NUMBER OF MEAS. SITES USED IN ABLATION AREA [numeric]

The minimum number of different sites at which measurements were taken in the ablation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only once counted.

E14 - MAXIMUM NUMBER OF MEAS. SITES USED IN ABLATION AREA [numeric]

The maximum number of different sites at which measurements were taken in the ablation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only once counted.

E15 - ACCUMULATION AREA [km<sup>2</sup>]

Accumulation area in horizontal projection.



E16 - ACCUMULATION AREA ACCURACY [km<sup>2</sup>]

Estimated maximum error for accumulation area.

E17 - ABLATION AREA [km<sup>2</sup>]

Ablation area in horizontal projection.

E18 - ABLATION AREA ACCURACY [km<sup>2</sup>]

Estimated maximum error for ablation area.

E19 - ACCUMULATION AREA RATIO [%]

Accumulation area divided by the total area, multiplied by 100. Given in percent.

E20 - INVESTIGATOR [alpha-numeric]

Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

E21 - SPONSORING AGENCY [alpha-numeric]

Full name, abbreviation and address of the agency where the data are held.

E22 - REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

## EE - MASS BALANCE

### NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier mass balance data with values related to the data given in data sheet E.

EE1 - POLITICAL UNIT [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

EE2 - GLACIER NAME [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

EE3 - WGMS ID [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database (cf. "A3 - WGMS ID").

EE4 - YEAR [year]

Year of present survey.

EE5 - LOWER BOUNDARY OF ALTITUDE INTERVAL [m a.s.l.]

If refers to entire glacier, then lower bound = 9999.

EE6 - UPPER BOUNDARY OF ALTITUDE INTERVAL [m a.s.l.]

If refers to entire glacier, then lower bound = 9999.

EE7 - ALTITUDE INTERVAL AREA [km<sup>2</sup>]

Area of each altitude interval (in horizontal projection).

EE8 - SPECIFIC WINTER BALANCE [mm w.e.]

Specific means the total value divided by the total glacier area under investigation.

Specific winter balance equals the net winter balance divided by the total area of the glacier.

EE9 - SPECIFIC WINTER BALANCE ACCURACY [mm w.e.]

Estimated maximum error for specific winter balance.

EE10 - SPECIFIC SUMMER BALANCE [mm w.e.]

Specific means the total value divided by the total glacier area, in this case, it is the net summer balance divided by the total area of the glacier.

EE11 - SPECIFIC SUMMER BALANCE ACCURACY [mm w.e.]

Estimated maximum error for specific winter balance.

EE12 - SPECIFIC ANNUAL BALANCE [mm w.e.]

Annual mass balance of glacier divided by the area of the glacier.

EE13 - SPECIFIC ANNUAL BALANCE ACCURACY [mm w.e.]

Estimated maximum error for specific annual balance.

EE14 - REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

## EEE - MASS BALANCE POINT

### NOTES ON THE COMPLETION OF THE DATA SHEET

EEE1 - POLITICAL UNIT [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

EEE2 - GLACIER NAME [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

EEE3 - WGMS ID [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database (cf. "A3 - WGMS ID").

EEE4 - YEAR [year]

Year of present survey.

EEE5 - POINT ID [alpha-numeric; 4 digits]

4 digit key identifying the stake or pit.

EEE6 - POINT LATITUDE [decimal degree North or South; up to 6 digits]

Latitude of stake or pit given in decimal degrees, positive values indicating the northern hemisphere and negative values indicating the southern hemisphere.

Latitude should be given to a maximum precision of 4 decimal places.

EEE7 - POINT LONGITUDE [decimal degree East or West; up to 7 digits]

Longitude of stake or pit given in decimal degrees, positive values indicating east of zero meridian and negative values indicating west of zero meridian.

Longitude should be given to a maximum precision of 4 decimal places.

EEE8 - POINT ELEVATION [m a.s.l.]

Elevation above sea level of stake or pit.

EEE9 - POINT WINTER BALANCE [mm w.e.]

Winter mass balance at stake or pit.

EEE10 - POINT SUMMER BALANCE [mm w.e.]

Summer mass balance at stake or pit.

EEE11 - POINT ANNUAL BALANCE [mm w.e.]

Annual mass balance at stake or pit.

EEE12 - REMARKS [alpha-numeric]

Any important information or comments not included above, such as measured or estimated density of snow/firn/ice, may be given here.

## **F - SPECIAL EVENT**

### **NOTES ON COMPLETION OF THE DATA SHEET**

This data sheet should be completed in cases of extraordinary events, especially concerning glacier hazards and dramatic changes in glaciers.

**F1 - POLITICAL UNIT** [alphabetic code; 2 digits]

Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

**F2 - GLACIER NAME** [alpha-numeric code; up to 30 digits]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

**F3 - WGMS ID** [numeric code; 5 digits]

5 digit key identifying glacier in the WGMS database (cf. "A3 - WGMS ID").

**F4 - EVENT DATE** [numeric; 8 digits]

Date of event.

For each event, please indicate the complete date in numeric format (YYYYMMDD).

Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "F6 - EVENT DESCRIPTION".

For events lasting for several days, please indicate the date of the main event, and describe the sequence of the event under "F6 - EVENT DESCRIPTION".

**F5 - EVENT TYPE** [binary code; 6 digits]

Indicate the involved event type(s) using 1 = event type involved and 0 = event type not involved for the following event types:

F5a - GLACIER SURGE

F5b - CALVING INSTABILITY

F5c - GLACIER FLOOD (including debris flow, mudflow)

F5d - ICE AVALANCHE

F5e - TECTONIC EVENT (earthquake, volcanic eruption)

F5f - OTHER

**F6 - EVENT DESCRIPTION** [alpha-numeric]

Please give quantitative information wherever possible, for example:

- Glacier surge: Date and location of onset, duration, flow or advance velocities, discharge anomalies and periodicity;

- Calving instability: Rate of retreat, iceberg discharge, ice flow velocity and water depth at calving front;

- Glacier flood (including debris flow, mudflow): Outburst volume, outburst mechanism, peak discharge, sediment load, reach and propagation velocity of flood

wave or front of debris flow / mudflow;

- Ice avalanche: Volume released, runout distance, overall slope (ratio of vertical drop height to horizontal travel distance) of avalanche path;

- Tectonic event: Volumes, runout distances and overall slopes (ratio of vertical drop height to horizontal travel distance) of rockslides on glacier surfaces, amount of geothermal melting in craters, etc.

F7 - DATA SOURCE [alpha-numeric]

Please indicate at least one reference or source which could help the reader to locate more detailed information, or give the name(s) of contact person(s) who would be able to supply additional information.

F8 - REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

The amount and/or kind of possible destruction, particular technical measures taken against glacier hazards, or special studies carried out in connection with the event may be given.







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|--|
| <p>WORLD GLACIER MONITORING SERVICE</p> <p><b>GENERAL INFORMATION ON THE</b></p> <p><b>OBSERVED GLACIERS 2005–2010</b></p> |
|--|

TABLE A

|               |   |
|---------------|---|
| NR            | Record number   |
| GLACIER NAME  | 15 alphabetic or numeric digits   |
| PSFG NUMBER   | 5 digits identifying glacier with alphabetic prefix denoting country  |
| LAT           | Latitude in decimal degrees north or south  |
| LON           | Longitudes in decimal degrees east or west  |
| CODE          | 3 digits giving “primary classification”, “form” and “frontal characteristics”, respectively  |
| EXP AC        | Exposition of accumulation area (cardinal points)   |
| EXP AB        | Exposition of ablation area (cardinal points)   |
| ELEVATION MAX | Maximum elevation of glacier in meters  |
| ELEVATION MED | Median elevation of glacier in meters*  |
| ELEVATION MIN | Minimum elevation of glacier in meters*   |
| AREA          | Total area of glacier in square kilometers*   |
| LEN           | Length of glacier along a flowline from maximum to minimum elevation in kilometers*   |
| TYPE OF DATA  | <p>B = Variations in the positions of glacier fronts 2005–2010 or Variations in the position of glacier fronts: addenda from earlier years</p> <p>C = Mass balance summary data 2005–2010 or Mass balance summary data: addenda from earlier years</p> <p>D = Changes in area, volume and thickness</p> <p>F = Index measurements or special events – see Chapter 4</p> |

\* these are the last reported values which may not correspond to the same survey year

| NR         | GLACIER NAME      | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF |      |
|------------|-------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|---------|------|
|            |                   |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |         | DATA |
| ANTARCTICA |                   |         |         |         |       |     |    |           |      |      |             |           |         |      |
| 1          | BAHIA D. DIABLO   | AQ      | 63.82 S | 57.43 W | 4-3-8 | NE  | E  | 630       | 390  | 50   | 14.3        | 7.6       | B       | C    |
| 2          | HURD              | AQ      | 62.69 S | 60.40 W | 4-3-3 | W   | W  | 334       |      | 4    | 4.034       |           |         | C    |
| 3          | JOHNSONS          | AQ      | 62.67 S | 60.35 W | 4-2-4 | NW  | NW | 356       |      | 0    | 5.358       |           |         | C    |
| ARGENTINA  |                   |         |         |         |       |     |    |           |      |      |             |           |         |      |
| 4          | AMEGHINO          | AR      | 50.46 S | 73.32 W | 4-2-4 | N   | E  |           |      |      |             |           |         | B    |
| 5          | AZUFRE            | AR      | 35.29 S | 70.55 W | 5-3-8 | E   | E  | 3700      | 3350 | 2850 | 3.87        | 3.5       | B       |      |
| 6          | BARROSO           | AR      | 33.46 S | 69.48 W | 5-3-9 | E   | SE | 5950      | 5300 | 3400 |             | 9.72      | B       |      |
| 7          | CAMISA            | AR      | 33.47 S | 69.50 W | 5-2-8 | S   | SE | 5950      | 5000 | 3950 |             | 6.69      | B       |      |
| 8          | CANON HISPANO     | AR      | 33.47 S | 69.51 W | 5-2-8 | NE  | NE | 5150      | 5000 | 3950 |             | 6.29      | B       |      |
| 9          | ESPERANZA N       | AR      | 42.13 S | 72.05 W |       |     |    | 2400      |      | 1080 | 10.76       | 4.94      | B       |      |
| 10         | FRIAS             | AR5004  | 41.15 S | 71.83 W | 5-3-8 | NE  | E  | 3550      | 2300 | 880  | 14.39       | 7.4       | B       |      |
| 11         | GR. NEV. D. PLOMO | AR      | 33.12 S | 70.04 W |       | E   | SE |           |      |      |             |           |         | F    |
| 12         | GUSSFELDT         | AR      | 32.61 S | 70.03 W | 5-2-6 | E   | E  | 5300      | 4950 | 4310 | 14.67       | 6.57      | B       |      |
| 13         | HORCONES INF      | AR5006  | 32.68 S | 69.98 W | 5-3-9 | SE  | S  | 4825      | 4100 | 3475 | 6.17        | 12.15     | B       |      |
| 14         | HUMO              | AR      | 34.55 S | 70.13 W |       |     |    | 4100      |      | 2700 | 15          | 7         | B       |      |
| 15         | LAGO DESIERTO I   | AR      | 49.05 S | 72.91 W | 6-3-8 | SE  | SE | 2032      |      | 1100 | 0.83        | 2.191     | B       |      |
| 16         | LAGO DESIERTO II  | AR      | 49.06 S | 72.92 W | 6-3-8 | SE  | SE | 1682      |      | 880  | 1.92        | 2.431     | B       |      |
| 17         | LAGO DESIERTO III | AR      | 49.07 S | 72.93 W | 6-3-8 | SE  | SE | 1830      |      | 1170 | 0.95        | 1.592     | B       |      |
| 18         | MARTIAL ESTE      | AR      | 54.78 S | 68.40 W | 6-4-6 | SE  | SE | 1170      | 1070 | 970  | 0.093       | 0.33      | B       | C    |
| 19         | NARVAEZ GRANDE    | AR      | 48.47 S | 72.34 W | 5-2-4 | E   | E  |           |      |      |             |           |         | B    |
| 20         | PENON             | AR      | 35.27 S | 70.56 W | 5-2-5 | E   | NE | 4100      | 3650 | 3180 | 4.42        | 3.1       | B       |      |
| 21         | PIEDRAS BLANCAS   | AR      | 49.26 S | 73.01 W | 5-3-4 | E   | E  | 2400      |      | 640  | 5.6         | 5.771     | B       |      |
| 22         | SALINILLAS        | AR      | 33.51 S | 69.52 W | 5-2-9 | SE  | SE | 5500      | 4300 | 3275 |             | 6.84      | B       |      |
| 23         | SAN JOSE          | AR      | 33.50 S | 69.51 W | 5-3-8 | SE  | E  | 5700      | 4600 | 3500 |             | 5.59      | B       |      |
| 24         | SAN LORENZO SUR   | AR      | 47.63 S | 72.30 W | 5-2-4 | SE  | S  |           |      |      |             |           |         | B    |
| 25         | TORRE             | AR      | 49.33 S | 73.07 W | 1-3-4 | E   | E  | 2600      |      | 635  | 24.6        | 6.853     | B       |      |
| 26         | TUPUNGATO 01      | AR      | 33.39 S | 69.75 W | 5-0-7 | SE  | NE | 6600      | 5300 | 4380 |             | 8.06      | B       |      |
| 27         | TUPUNGATO 02      | AR      | 33.38 S | 69.75 W | 5-0-7 | SE  | E  | 6100      | 5100 | 4600 |             | 3.34      | B       |      |
| 28         | TUPUNGATO 03      | AR      | 33.36 S | 69.75 W | 5-0-7 | E   | NE | 6400      | 5650 | 4625 |             | 2.99      | B       |      |
| 29         | TUPUNGATO 04      | AR      | 33.34 S | 69.75 W | 5-0-7 | NE  | NE | 6450      | 6050 | 4775 |             | 3.28      | B       |      |
| 30         | VACAS             | AR      | 32.55 S | 69.99 W | 5-2-6 | E   | E  | 5400      | 4700 | 3730 | 18.23       | 6.08      | B       |      |
| AUSTRIA    |                   |         |         |         |       |     |    |           |      |      |             |           |         |      |
| 31         | ALPEINER F.       | AT0307  | 47.05 N | 11.13 E | 5-2-8 | N   | NE | 3340      | 2930 | 2310 | 3.94        | 4.6       | B       |      |
| 32         | BACHFALLEN F.     | AT0304  | 47.08 N | 11.08 E | 6-0-8 | N   | N  | 3120      | 2850 | 2580 | 2.55        | 2.9       | B       |      |
| 33         | BAERENKOPF K.     | AT0702  | 47.13 N | 12.72 E | 6-2-4 | N   | N  | 3400      | 3030 | 2270 | 2.5         | 3.1       | B       |      |
| 34         | BERGLAS F.        | AT0308  | 47.07 N | 11.12 E | 6-0-8 | E   | NE | 3290      | 2990 | 2490 | 1.47        | 2.5       | B       |      |
| 35         | BIELTAL F.        | AT0105A | 46.88 N | 10.13 E | 6-0-6 | NW  | NW | 3000      | 2740 | 2544 | 0.73        | 1.1       | B       |      |
| 36         | BIELTAL F. W      | AT0105B | 46.87 N | 10.13 E | 6-4-6 | NW  | NW | 2810      | 2680 | 2540 | 0.29        | 0.9       | B       |      |
| 37         | BIELTALFERNER M   | AT      | 46.88 N | 10.13 E |       |     |    |           |      |      |             |           |         | B    |
| 38         | BRENNKOGEL K.     | AT0727  | 47.10 N | 12.80 E | 6-4-6 | N   | N  | 2960      | 2670 | 2430 | 0.59        | 1.2       | B       |      |
| 39         | DAUNKOGEL F.      | AT0310A | 47.00 N | 11.10 E | 6-0-8 | NE  | NE | 3240      | 2880 | 2550 | 2.69        | 2.9       | B       |      |
| 40         | DIEM F.           | AT0220  | 46.81 N | 10.95 E | 6-0-8 | NW  | NW | 3540      | 3060 | 2710 | 3.5         | 3.4       | B       |      |
| 41         | EISKAR G.         | AT1301  | 46.62 N | 12.90 E | 6-4-6 | N   | N  | 2390      | 2250 | 2160 | 0.151       | 0.4       | B       |      |
| 42         | FERNAU F.         | AT0312  | 46.98 N | 11.13 E | 6-4-8 | NW  | N  | 3310      | 2850 | 2380 | 2.02        | 2.5       | B       |      |
| 43         | FREIGER F.        | AT0320  | 46.97 N | 11.20 E | 6-0-6 | NE  | NE | 3370      | 3090 | 2720 | 0.59        | 1.5       | B       |      |
| 44         | FREIWAND K.       | AT0706  | 47.10 N | 12.75 E | 6-4-8 | SE  | SE | 3130      | 2890 | 2690 | 0.35        | 1.1       | B       |      |
| 45         | FROSCHNITZ K.     | AT0507  | 47.08 N | 12.40 E | 6-3-6 | E   | E  | 3330      | 2780 | 2400 | 4.19        | 4.4       | B       |      |
| 46         | FURTSCHAGL K.     | AT0406  | 47.00 N | 11.77 E | 6-0-8 | NW  | NW | 3480      | 2890 | 2542 | 1           | 1.6       | B       |      |
| 47         | GAISKAR F.        | AT0325  | 46.97 N | 11.12 E | 6-4-8 | SE  | SE | 3190      | 3070 | 2890 | 0.75        | 1.1       | B       |      |
| 48         | GAISSBERG F.      | AT0225  | 46.83 N | 11.07 E | 5-2-8 | NW  | NW | 3390      | 2850 | 2460 | 1.35        | 3.3       | B       |      |
| 49         | GEPATSCH F.       | AT0202  | 46.85 N | 10.77 E | 5-2-8 | NE  | N  | 3536      | 3057 | 2060 | 17.346      | 8.2       | B       |      |
| 50         | GOESSNITZ K.      | AT1201  | 46.97 N | 12.75 E | 6-4-7 | NW  | NW | 3060      | 2690 | 2520 | 0.86        | 1.5       | B       |      |
| 51         | GOLDBERG K.       | AT0802B | 47.03 N | 12.47 E | 6-4-8 | SE  | NE | 3080      | 2680 | 2310 | 1.316       | 2.8       | B       | C    |
| 52         | GR. GOSAU G.      | AT1101  | 47.48 N | 13.60 E | 6-4-6 | NW  | NW | 2810      | 2520 | 2250 | 1.48        | 2.2       | B       |      |
| 53         | GROSSELEND K.     | AT1001  | 47.03 N | 13.32 E | 6-3-6 | NW  | NW | 3140      | 2720 | 2410 | 2.76        | 2.4       | B       |      |
| 54         | GRUENAU F.        | AT0315  | 46.98 N | 11.20 E | 6-4-8 | N   | N  | 3415      | 2941 | 2363 | 1.72        | 2.24      | B       |      |
| 55         | GURGLER F.        | AT0222  | 46.80 N | 10.98 E | 5-2-8 | NW  | N  | 3420      | 2990 | 2270 | 11.865      | 8         | B       |      |
| 56         | GUSLAR F.         | AT0210  | 46.85 N | 10.80 E | 6-4-8 | E   | SE | 3480      | 3120 | 2780 | 2.63        | 2.5       | B       |      |

| NR  | GLACIER NAME     | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|-----|------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|     |                  |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 57  | HALLSTAETTER G.  | AT1102  | 47.48 N | 13.62 E | 6-0-8 | NE  | NE | 2910      | 2560 | 2080 | 3.3         | 2.3       | B               |
| 58  | HINTEREIS F.     | AT0209  | 46.80 N | 10.77 E | 5-2-8 | E   | NE | 3727      | 3011 | 2400 | 6.858       | 7.1       | B C D           |
| 59  | HOCHALM K.       | AT1005  | 47.02 N | 13.33 E | 6-3-6 | E   | E  | 3350      | 2880 | 2540 | 3.16        | 2.4       | B               |
| 60  | HOCHJOCH F.      | AT0208  | 46.78 N | 10.82 E | 5-2-6 | N   | NW | 3500      | 3030 | 2580 | 7.13        | 3.8       | B               |
| 61  | HORN K.(SCHOB.)  | AT1202  | 46.97 N | 12.77 E | 6-4-8 | N   | NW | 3010      | 2780 | 2600 | 0.46        | 1.1       | B               |
| 62  | HORN K.(ZILLER)  | AT0402  | 47.00 N | 11.82 E | 5-3-8 | N   | N  | 3213      | 2777 | 2089 | 3.417       | 3         | B               |
| 63  | INN.PIRCHLKAR    | AT0228  | 47.00 N | 10.92 E | 6-5-6 | E   | NE | 3340      | 2990 | 2720 | 0.62        | 1.8       | B               |
| 64  | JAMTAL F.        | AT0106  | 46.87 N | 10.17 E | 5-2-8 | N   | N  | 3120      | 2780 | 2370 | 3.171       | 2.8       | B C D           |
| 65  | KAELBERSPITZ K.  | AT1003  | 47.03 N | 13.28 E | 6-0-8 | N   | N  | 2890      | 2690 | 2450 | 0.82        | 2.2       | B               |
| 66  | KALS. BAEREN. K. | AT      | 47.11 N | 13.60 E |       |     |    |           |      |      |             |           | B               |
| 67  | KARLINGER K.     | AT0701  | 47.13 N | 12.70 E | 6-2-4 | NE  | N  | 3340      | 2800 | 2060 | 4.04        | 3.6       | B               |
| 68  | KESSELWAND F.    | AT0226  | 46.84 N | 10.79 E | 6-3-8 | SE  | E  | 3490      | 3180 | 2698 | 3.659       | 4.25      | B C D           |
| 69  | KLEINEISER K.    | AT0717  | 47.15 N | 12.67 E | 6-4-6 | NW  | NW | 2880      | 2730 | 2620 | 0.25        | 0.7       | B               |
| 70  | KLEINELEND K.    | AT1002  | 47.07 N | 13.25 E | 6-3-4 | NE  | NE | 3190      | 2750 | 2150 | 3.04        | 2.7       | B               |
| 71  | KLEINFLEISS K.   | AT0801  | 47.05 N | 12.95 E | 6-0-6 | W   | W  | 3080      | 2840 | 2510 | 0.831       | 2.3       | B C             |
| 72  | KLOSTERTALER M   | AT0102B | 46.87 N | 10.07 E | 6-0-8 | W   | W  | 3220      | 2940 | 2640 | 0.45        | 1.6       | B               |
| 73  | KLOSTERTALER N   | AT0102A | 46.87 N | 10.07 E | 6-0-8 | NW  | NW | 3220      | 2880 | 2600 | 2.59        | 1.7       | B               |
| 74  | KRIMMLER K.      | AT0501A | 47.08 N | 12.25 E | 6-2-6 | NW  | NW | 3490      | 2550 | 1910 | 7.52        | 3.5       | B               |
| 75  | KRIMMLER K. E    | AT0501B | 47.08 N | 12.25 E | 6-3-6 | W   | W  | 3280      | 2550 | 2290 | 7.52        | 2.2       | B               |
| 76  | LAENGENTALER F.  | AT0305  | 47.08 N | 11.10 E | 6-4-7 | NE  | N  | 3200      | 2820 | 2540 | 0.89        | 2.2       | B               |
| 77  | LANDECK K.       | AT0604  | 47.13 N | 12.58 E | 6-4-6 | N   | N  | 2940      | 2600 | 2430 | 0.41        | 0.9       | B               |
| 78  | LANGTALER F.     | AT0223  | 46.79 N | 11.02 E | 5-3-8 | N   | NW | 3420      | 2910 | 2450 | 3.049       | 5.1       | B               |
| 79  | LITZNERGL.       | AT0101  | 46.88 N | 10.05 E | 6-4-7 | N   | N  | 2970      | 2630 | 2450 | 0.71        | 1.2       | B               |
| 80  | MARZELL F.       | AT0218  | 46.78 N | 10.88 E | 5-2-8 | NW  | N  | 3620      | 3160 | 2450 | 5.14        | 4.4       | B               |
| 81  | MAURER K.(GLO.)  | AT0714  | 47.18 N | 12.68 E | 6-4-6 | W   | W  | 2890      | 2730 | 2610 | 0.49        | 1.4       | B               |
| 82  | MAURER K.(VEN.)  | AT0510  | 47.08 N | 12.30 E | 6-0-8 | S   | S  | 3490      | 2840 | 2330 | 7.33        | 3.1       | B               |
| 83  | MITTERKAR F.     | AT0214  | 46.88 N | 10.87 E | 6-4-6 | SE  | SE | 3580      | 3230 | 2960 | 1.1         | 2.1       | B               |
| 84  | MUTMAL F.        | AT0227  | 46.78 N | 10.92 E | 6-4-8 | N   | NW | 3520      | 3080 | 2720 | 0.79        | 1.5       | B               |
| 85  | NIEDERJOCH F.    | AT0217  | 46.78 N | 10.87 E | 5-2-8 | N   | N  | 3600      | 3100 | 2690 | 2.9         | 3         | B               |
| 86  | OBERSULZB.K.     | AT0502  | 47.11 N | 12.29 E | 5-1-8 | NW  | NW | 3600      | 2730 | 1990 | 15.3        | 5.7       | B               |
| 87  | OCHSENTALERGL.   | AT0103  | 46.85 N | 10.10 E | 5-2-8 | N   | N  | 3160      | 2910 | 2290 | 2.59        | 2.8       | B               |
| 88  | OEDENWINKEL K.   | AT0712  | 47.11 N | 12.65 E | 5-3-9 | NW  | NW | 3180      | 2590 | 2130 | 2.22        | 3.8       | B               |
| 89  | PASTERZE         | AT0704  | 47.10 N | 12.70 E | 5-2-8 | SE  | SE | 3700      | 2990 | 2070 | 17.71       | 9.4       | B C             |
| 90  | PFaffen F.       | AT0324  | 46.96 N | 11.14 E | 6-4-8 | W   | W  | 3470      | 3060 | 2770 | 1.21        | 1.8       | B               |
| 91  | PRAEGRAT K.      | AT0603  | 47.12 N | 12.59 E | 6-0-6 | W   | W  | 3020      | 2800 | 2630 | 1.44        | 1.1       | B               |
| 92  | RETTENBACH F.    | AT0212  | 46.93 N | 10.93 E | 6-4-6 | N   | N  | 3350      | 2920 | 2610 | 1.79        | 2.5       | B               |
| 93  | ROFENKAR F.      | AT0215  | 46.88 N | 10.88 E | 6-4-4 | SE  | SE | 3750      | 3290 | 2820 | 1.26        | 2.2       | B               |
| 94  | ROTER KNOPF K.   | AT      | 46.97 N | 12.75 E |       |     |    |           |      |      |             |           | B               |
| 95  | ROTMOOS F.       | AT0224  | 46.82 N | 11.05 E | 6-2-8 | N   | N  | 3410      | 2960 | 2370 | 3.17        | 3.3       | B               |
| 96  | SCHALF F.        | AT0219  | 46.78 N | 10.93 E | 5-2-8 | NW  | NW | 3500      | 3130 | 2500 | 8.47        | 5.6       | B               |
| 97  | SCHAUFEL F.      | AT0311  | 46.98 N | 11.12 E | 6-0-8 | NE  | NE | 3150      | 2850 | 2560 | 1.46        | 2.3       | B               |
| 98  | SCHLADMING. G.   | AT1103  | 47.47 N | 13.63 E | 6-4-6 | NE  | NE | 2700      | 2600 | 2420 | 0.81        | 0.9       | B               |
| 99  | SCHLATEN K.      | AT0506  | 47.11 N | 12.38 E | 5-1-8 | NE  | NE | 3670      | 2810 | 1940 | 11.27       | 6.3       | B               |
| 100 | SCHLEGEIS K.     | AT0405  | 46.98 N | 11.77 E | 6-0-4 | NW  | NW | 3480      | 2846 | 2446 | 4.085       | 1.7       | B               |
| 101 | SCHMIEDINGER K.  | AT0726  | 47.18 N | 12.68 E | 6-0-6 | NE  | NE | 3160      | 2750 | 2410 | 1.81        | 2         | B               |
| 102 | SCHNEEGLOCKEN    | AT0109  | 46.87 N | 10.10 E | 6-4-6 | NE  | NE | 3020      | 2770 | 2570 | 0.72        | 1.2       | B               |
| 103 | SCHNEELOCH G.    | AT1104  | 47.50 N | 13.60 E | 6-4-8 | NW  | NW | 2530      | 2300 | 2190 | 0.23        | 0.8       | B               |
| 104 | SCHWARZENB. F.   | AT0303  | 47.05 N | 11.12 E | 6-3-8 | SE  | SW | 3490      | 3030 | 2590 | 1.84        | 2.9       | B               |
| 105 | SCHWARZENSTEIN   | AT0403  | 47.02 N | 11.85 E | 5-0-8 | NW  | NW | 3320      | 2902 | 2319 | 4.118       | 2.5       | B               |
| 106 | SCHWARZKARL K.   | AT0716  | 47.17 N | 12.67 E | 6-4-6 | NW  | NW | 2970      | 2750 | 2560 | 0.47        | 1.2       | B               |
| 107 | SCHWARZK.K.      | AT0710  | 47.15 N | 12.72 E | 6-4-8 | N   | NW | 2860      | 2570 | 2340 | 0.54        | 1.2       | B               |
| 108 | SEXEGERTEN F.    | AT0204  | 46.90 N | 10.80 E | 6-2-8 | N   | NE | 3470      | 2950 | 2560 | 2.83        | 2.9       | B               |
| 109 | SIMILAUN F.      | AT      | 46.78 N | 10.88 E |       |     |    |           |      |      |             |           | B               |
| 110 | SIMMING F.       | AT0318  | 46.98 N | 11.25 E | 6-0-8 | N   | N  | 3170      | 2700 | 2340 | 2.52        | 2.3       | B               |
| 111 | SIMONY K.        | AT0511  | 47.07 N | 12.27 E | 6-0-9 | SE  | SE | 3490      | 2810 | 2230 | 4.16        | 3.5       | B               |
| 112 | SPIEGEL F.       | AT0221  | 46.83 N | 10.95 E | 6-4-8 | NW  | NW | 3430      | 3080 | 2780 | 1.11        | 1.7       | B               |
| 113 | ST. SONNBlick K. | AT0601A | 47.13 N | 12.60 E | 6-0-6 | NE  | E  | 3050      | 2780 | 2500 | 1.194       | 1.5       | B C             |
| 114 | SULZENAU F.      | AT0314A | 46.98 N | 11.15 E | 5-1-8 | N   | N  | 3501      | 3012 | 2468 | 4.473       | 3.64      | B               |
| 115 | SULZTAL F.       | AT0301  | 47.00 N | 11.08 E | 5-2-8 | N   | N  | 3350      | 2860 | 2290 | 4.48        | 4.1       | B               |
| 116 | TASCHACH F.      | AT0205  | 46.90 N | 10.85 E | 5-2-8 | N   | NW | 3760      | 3130 | 2240 | 8.16        | 5.6       | B               |
| 117 | TOTENFELD        | AT0110  | 46.88 N | 10.15 E | 6-4-8 | NE  | NE | 3040      | 2790 | 2550 | 0.72        | 1.5       | B               |

| NR             | GLACIER NAME     | PSFG NR | LAT     | LON      | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|----------------|------------------|---------|---------|----------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|                |                  |         |         |          |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 118            | TOTENKOPF K.     | AT      | 47.13 N | 12.66 E  |       |     |    |           |      |      |             |           | B               |
| 119            | TRIEBENKAR. F.   | AT0323  | 46.96 N | 11.15 E  | 6-4-8 | W   | W  | 3460      | 3040 | 2760 | 1.79        | 2         | B               |
| 120            | UMBAL K.         | AT0512  | 47.05 N | 12.25 E  | 5-3-8 | SW  | SW | 3440      | 2850 | 2230 | 7.33        | 5         | B               |
| 121            | UNT. RIFFL KEES  | AT0713B | 47.13 N | 12.67 E  | 6-4-9 | N   | NW | 2910      | 2530 | 2290 | 1.01        | 2         | B               |
| 122            | UNTERSULZB. K.   | AT0503  | 47.13 N | 12.35 E  | 5-2-8 | N   | NW | 3670      | 2720 | 2070 | 5.92        | 6.3       | B               |
| 123            | VERBORBENB. F.   | AT0322  | 47.07 N | 11.12 E  | 6-4-6 | E   | E  | 3260      | 3000 | 2780 | 0.89        | 1.3       | B               |
| 124            | VERMUNTGL.       | AT0104  | 46.85 N | 10.13 E  | 6-2-8 | NW  | NW | 3130      | 2790 | 2430 | 2.16        | 2.8       | B               |
| 125            | VERNAGT FERNER   | AT0211  | 46.88 N | 10.82 E  | 6-2-6 | S   | SE | 3631      | 3150 | 2793 | 7.916       | 2.6       | B C D           |
| 126            | VILTRAGEN K.     | AT0505  | 47.13 N | 12.37 E  | 5-2-8 | NE  | E  | 3480      | 2660 | 2190 | 4.35        | 4.5       | B               |
| 127            | W.TRIPP K.       | AT1004  | 47.02 N | 13.32 E  | 6-4-6 | SE  | S  | 3230      | 2880 | 2780 | 0.6         | 1.5       | B               |
| 128            | WASSERFALLW.     | AT0705  | 47.12 N | 12.72 E  | 6-3-8 | SE  | S  | 3150      | 2870 | 2610 | 1.93        | 2.5       | B               |
| 129            | WAXEGG K.        | AT0401  | 47.00 N | 11.80 E  | 6-3-6 | NE  | N  | 3310      | 2852 | 2394 | 3.207       | 1.97      | B               |
| 130            | WEISSEE F.       | AT0201  | 46.85 N | 10.72 E  | 6-0-8 | N   | N  | 3530      | 2970 | 2540 | 3.48        | 3.4       | B               |
| 131            | W. GRUEBLER F. W | AT      | 46.96 N | 11.18 E  |       |     |    |           |      |      |             |           | B               |
| 132            | WIELINGER K.     | AT0725  | 47.15 N | 12.75 E  | 6-0-4 | N   | NW | 3560      | 2940 | 2180 | 0.98        | 2.4       | B               |
| 133            | WILDGERLOS       | AT0404  | 47.15 N | 12.11 E  | 6-0-8 | N   | N  | 3260      | 2650 | 2110 | 3.68        | 2.8       | B               |
| 134            | WINKL K.         | AT1006  | 47.02 N | 13.32 E  | 6-4-8 | W   | W  | 3100      | 2710 | 2390 | 0.66        | 1.5       | B               |
| 135            | WURTEN K.        | AT0804  | 47.04 N | 13.01 E  | 6-2-8 | SW  | S  | 3120      | 2680 | 2380 | 0.77        | 3         | B C             |
| 136            | ZETTALUNITZ K.   | AT0508  | 47.08 N | 12.38 E  | 6-3-8 | SW  | SW | 3470      | 2980 | 2450 | 5.47        | 4.5       | B               |
| <u>BOLIVIA</u> |                  |         |         |          |       |     |    |           |      |      |             |           |                 |
| 137            | CHACALTAYA       | BO5180  | 16.35 S | 68.12 W  | 6-4-8 | S   | S  | 5330      | 5290 | 5230 | 0.001       | 0.206     | B C D           |
| 138            | CHARQUINI N      | BO      | 16.36 S | 68.12 W  |       |     |    | 5260      |      | 5070 | 0.23        | 0.6       | B               |
| 139            | CHARQUINI OESTE  | BO      | 16.28 S | 68.19 W  |       |     |    | 5150      |      | 4950 | 0.11        | 0.508     | B               |
| 140            | CHARQUINI SUR    | BO      | 16.17 S | 68.09 W  |       | S   | S  | 5334      | 5143 | 5030 | 0.319       | 0.46      | B C D           |
| 141            | CHARQUINI SE     | BO      | 16.30 S | 68.15 W  |       |     |    | 5350      |      | 4830 | 0.52        | 1.597     | B               |
| 142            | JANKHU UYU       | BO      | 16.05 S | 68.32 W  |       |     |    | 5450      |      | 5100 | 0.35        | 0.864     | B               |
| 143            | WILA LLUXITA     | BO      | 16.05 S | 68.30 W  |       |     |    | 5240      |      | 5000 | 0.34        | 0.847     | B               |
| 144            | ZONGO            | BO5150  | 16.25 S | 68.17 W  | 5-3-8 | S   | E  | 6000      | 5420 | 4915 | 1.91        | 2.75      | B C D           |
| <u>CANADA</u>  |                  |         |         |          |       |     |    |           |      |      |             |           |                 |
| 145            | CASTLE CREEK     | CA      | 53.04 N | 120.46 W | 5-3-8 | N   | N  | 2825      | 2425 | 1810 |             | 5.85      | B               |
| 146            | DEVON I C NW     | CA0431  | 75.42 N | 83.25 W  | 3-0-3 | NW  | NW | 1890      | 1200 | 0    | 1667.6      | 50        | C               |
| 147            | HELM             | CA0855  | 49.97 N | 123.00 W | 6-2-6 | NW  | NW | 2150      | 1900 | 1770 | 2.5         | 2.4       | C               |
| 148            | KASKAWULSH       | CA      | 60.72 N | 138.80 W |       |     |    |           |      |      |             |           | D               |
| 149            | MEIGHEN ICE CAP  | CA1335  | 79.95 N | 99.13 W  | 3-0-3 |     |    | 1267      | 600  | 70   | 85          | 56        | C               |
| 150            | PEYTO            | CA1640  | 51.67 N | 116.53 W | 5-3-8 | NE  | NE | 3190      | 2640 | 2130 | 13.35       | 5.3       | C               |
| 151            | PLACE            | CA1660  | 50.43 N | 122.60 W | 5-3-8 | NE  | NW | 2610      | 2089 | 1860 |             | 4.2       | C               |
| 152            | S MELVILLE I C   | CA      | 75.40 N | 115.00 W | 3-0-0 |     |    | 697       |      | 543  |             |           | C               |
| 153            | STEELE           | CA      | 60.00 N | 130.00 W |       |     |    |           |      |      |             |           | F               |
| 154            | TWEEDSMUIR       | CA      | 59.81 N | 138.15 W |       |     |    |           |      |      |             |           | D               |
| 155            | WHITE            | CA2340  | 79.45 N | 90.67 W  | 5-1-5 | SE  | SE | 1780      | 1160 | 80   | 38.9        | 15.4      | C               |
| <u>CHILE</u>   |                  |         |         |          |       |     |    |           |      |      |             |           |                 |
| 156            | CIPRESES         | CL0071  | 34.55 S | 70.37 W  | 6-2-5 | W   | W  | 4450      | 3680 | 2600 | 39.4        | 11.8      | B               |
| 157            | ECHAURREN N      | CL0001B | 33.58 S | 70.13 W  | 6-4-3 | SW  | SW | 3880      | 3750 | 3650 | 0.4         | 1.2       | C               |
| 158            | LENGUA           | CL1019  | 52.81 S | 73.00 W  |       | SE  | SE | 1013      |      | 98   |             | 4.09      | B               |
| 159            | NOROESTE         | CL      | 52.73 S | 73.12 W  |       |     |    | 1600      |      | 10   | 51.5        | 13.9      | B               |
| 160            | OESTE M          | CL      | 52.82 S | 73.17 W  |       |     |    | 1326      |      | 451  | 3.1         | 3.012     | B               |
| 161            | OESTE N          | CL      | 52.80 S | 73.15 W  |       |     |    | 1654      |      | 0    | 30.91       | 11.088    | B               |
| 162            | OESTE S L        | CL      | 52.83 S | 73.23 W  |       |     |    | 1606      |      | 118  | 15.06       | 9.514     | B               |
| 163            | OESTE S R        | CL      | 52.83 S | 73.20 W  |       |     |    | 1606      |      | 118  | 15.06       | 8.393     | B               |
| <u>CHINA</u>   |                  |         |         |          |       |     |    |           |      |      |             |           |                 |
| 164            | HAILUOGOU        | CN0031  | 29.58 N | 101.93 E | 5-2-8 | SE  | SE | 7556      | 5100 | 2980 |             | 13.1      | B               |
| 165            | KANGWURE         | CN      | 28.45 N | 85.75 E  | 5-3-6 | NE  | NE | 6100      |      | 5500 | 1.96        | 3.12      | B D             |
| 166            | URUMQI GL. NO. 1 | CN0010  | 43.08 N | 86.82 E  | 6-2-2 | NE  | NE | 4484      | 4016 | 3743 | 1.645       | 2.028     | B C             |
| 167            | URUMQI I E-BR.   | CN0001  | 43.08 N | 86.82 E  | 6-2-8 | NE  | NE | 4267      | 3978 | 3743 | 1.068       | 2.028     | B C             |
| 168            | URUMQI I W-BR.   | CN0002  | 43.08 N | 86.82 E  | 6-2-8 | NE  | NE | 4484      | 4087 | 3845 | 0.577       | 1.714     | B C             |

| NR        | GLACIER NAME      | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|-----------|-------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|           |                   |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| C.I.S.    |                   |         |         |         |       |     |    |           |      |      |             |           |                 |
| 169       | ASHU-TOR S (326)  | SU      | 42.04 N | 78.16 E |       |     |    | 4472      |      | 3550 | 6           | 6.042     | B               |
| 170       | BIRDZHALYCHIR.    | SU3026  | 43.37 N | 42.53 E | 0-0-6 | NE  | NE | 5600      | 3650 | 3320 | 12.69       | 6.46      | B               |
| 171       | BITYUKTYUBE       | SU3034  | 43.37 N | 42.40 E | 0-0-7 | NW  | NW | 4670      | 4000 | 3325 | 2.22        | 3.34      | B               |
| 172       | BOLSHOY AZAU      | SU3004  | 43.28 N | 42.43 E | 0-0-8 | S   | SE | 5610      | 3900 | 2526 | 18.76       | 8.94      | B               |
| 173       | BOLSHOY CHON.     | SU      | 41.97 N | 77.90 E |       |     |    | 4658      |      | 3900 | 6.6         | 4.38      | B               |
| 174       | CHUNGURCHAT.      | SU3027  | 43.37 N | 42.55 E | 0-0-6 | NE  | NE | 5600      | 3650 | 3182 | 12.5        | 6.72      | B               |
| 175       | DJANKUAT          | SU3010  | 43.20 N | 42.77 E | 5-2-9 | N   | NW | 3780      | 3250 | 2710 | 2.688       | 4.2       | C               |
| 176       | GARABASHI         | SU3031  | 43.30 N | 42.47 E | 0-0-8 | SE  | S  | 5000      | 3880 | 3325 | 4.42        | 5.7       | B C             |
| 177       | GREGORIEV         | SU      | 41.96 N | 77.92 E |       |     |    | 4585      |      | 4142 | 9.4         | 3.757     | B               |
| 178       | IRIK              | SU3029  | 43.33 N | 42.50 E | 0-0-7 | SE  | SE | 5600      | 3900 | 2623 | 10.1        | 8.51      | B               |
| 179       | IRIKCHAT          | SU3028  | 43.33 N | 42.53 E | 0-0-7 | SE  | SE | 3960      | 3650 | 3222 | 1.73        | 2.37      | B               |
| 180       | KARACHAUL         | SU3022  | 43.38 N | 42.45 E | 0-0-6 | N   | N  | 5610      | 4000 | 3093 | 5.14        | 6.14      | B               |
| 181       | KOLPAKOVSKY       | SU      | 42.08 N | 78.28 E |       |     |    | 4700      |      | 3550 | 26.2        | 13.043    | B               |
| 182       | KYUKYURTLYU       | SU3033  | 43.35 N | 42.38 E | 0-0-7 | W   | W  | 5640      | 4250 | 2768 | 6.59        | 7.43      | B               |
| 183       | LEVIY AKTRU       | SU7102  | 50.08 N | 87.72 E | 5-3-6 | SE  | SE | 4043      | 3250 | 2575 | 5.95        | 5.84      | B C             |
| 184       | MALIY AKTRU       | SU7100  | 50.08 N | 87.75 E | 5-3-8 | E   | N  | 3714      | 3200 | 2234 | 2.73        | 4.22      | B C             |
| 185       | MALIY AZAU        | SU3032  | 43.28 N | 42.45 E | 0-0-6 | S   | S  | 5610      | 4000 | 3077 | 8.47        | 7         | B               |
| 186       | MIKELCHIRAN       | SU3025  | 43.37 N | 42.50 E | 0-0-6 | NE  | NE | 4900      | 3900 | 3262 | 4.44        | 4.65      | B               |
| 187       | NO. 125 (VODOP.)  | SU7105  | 50.10 N | 87.70 E | 3-0-3 | N   | N  | 3552      | 3230 | 3038 | 0.75        | 1.38      | B C             |
| 188       | NO.211            | SU      | 42.01 N | 77.96 E |       |     |    | 4659      |      | 3890 | 4.4         | 4.851     | B               |
| 189       | NO.324            | SU      | 42.04 N | 78.18 E |       |     |    | 4530      |      | 3895 | 6.3         | 5.892     | B               |
| 190       | NO.392            | SU      | 42.00 N | 77.97 E |       |     |    | 4588      |      | 3900 | 4.9         | 3.879     | B               |
| 191       | NO.393            | SU      | 41.99 N | 77.97 E |       |     |    | 4567      |      | 3940 | 4.1         | 4.97      | B               |
| 192       | NO.394            | SU      | 41.98 N | 77.96 E |       |     |    | 4614      |      | 4120 | 3.3         | 2.644     | B               |
| 193       | POPOV             | SU      | 41.99 N | 77.93 E |       |     |    | 4765      |      | 3850 | 8.6         | 6.074     | B               |
| 194       | TERSKOL           | SU3030  | 43.30 N | 42.48 E | 0-0-6 | S   | SE | 5600      | 3900 | 2990 | 7.53        | 6.54      | B               |
| 195       | TS.TUYUKSU.Y.     | SU5075  | 43.05 N | 77.08 E | 5-3-6 | N   | N  | 4219      | 3815 | 3458 | 2.446       | 2.777     | B C D           |
| 196       | ULLUCHIRAN        | SU3021  | 43.38 N | 42.43 E | 0-0-7 | N   | N  | 5640      | 4100 | 3065 | 11.92       | 6.17      | B               |
| 197       | ULLUKOL           | SU3023  | 43.38 N | 42.47 E | 0-0-6 | N   | N  | 5600      | 3750 | 3363 | 2.37        | 5.7       | B               |
| 198       | ULLUMALIENDER.    | SU3024  | 43.38 N | 42.48 E | 0-0-6 | N   | N  | 5600      | 3750 | 3171 | 2.41        | 5.79      | B               |
| COLOMBIA  |                   |         |         |         |       |     |    |           |      |      |             |           |                 |
| 199       | LA CONEJERA       | CO0033  | 4.48 N  | 75.22 W | 6-3-6 | NW  | NW | 4958      | 4839 | 4721 | 0.22        | 1.1       | B C D           |
| 200       | LOS RITACUBAS     | CO      | 6.45 N  | 72.30 W |       |     |    |           |      |      | 7.347       |           | C               |
| 201       | VOL.NEV. D. HUILA | CO      | 2.92 N  | 76.05 W |       |     |    | 5655      |      | 4250 | 12.95       | 6.5       | F               |
| ECUADOR   |                   |         |         |         |       |     |    |           |      |      |             |           |                 |
| 202       | ANTIZ.15ALPHA     | EC0001  | 0.47 S  | 78.15 W | 4-7-8 | NW  | NW | 5760      | 5309 | 4858 | 0.293       | 1.864     | B C             |
| FRANCE    |                   |         |         |         |       |     |    |           |      |      |             |           |                 |
| 203       | ARGENTIERE        | FR0002  | 45.95 N | 6.98 E  | 5-1-9 | NW  | NW | 3500      | 2600 | 1500 | 15.6        | 9         | B C             |
| 204       | BLANC             | FR0031  | 44.94 N | 6.39 E  | 5-2-8 | E   | S  | 4000      | 3000 | 2500 |             | 7         | B               |
| 205       | BOSSONS           | FR0004  | 45.88 N | 6.86 E  | 5-2-8 | N   | N  | 4800      | 3200 | 1190 | 10.53       | 7.2       | B               |
| 206       | DRUS, GLACIER DE  | FR      | 45.94 N | 6.96 E  | 6-3-9 | E   | E  |           |      |      |             |           | F               |
| 207       | GEBROULAZ         | FR0009  | 45.30 N | 6.63 E  | 5-2-9 | N   | N  | 3400      | 3000 | 2600 | 2.76        | 3         | B C             |
| 208       | MER DE GLACE      | FR0003  | 45.88 N | 6.93 E  | 5-1-9 | N   | N  | 3600      | 3000 | 1480 | 33          | 12        | B F             |
| 209       | OSSOUE            | FR      | 42.77 N | 0.14 W  | 5-2-9 | E   | E  | 3200      | 3000 | 2750 |             | 1.4       | B C             |
| 210       | ROCHEMELON        | FR      | 45.22 N | 6.07 E  | 5-3-8 | NW  | NW | 3300      |      | 2950 | 1.6         |           | F               |
| 211       | SAINT SORLIN      | FR0015  | 45.17 N | 6.15 E  | 5-2-9 | N   | N  | 3400      | 2900 | 2600 | 3           | 3         | B C             |
| 212       | SARENNES          | FR0029  | 45.14 N | 6.14 E  | 5-4-8 | S   | S  | 3150      | 3000 | 2850 |             | 1         | C               |
| 213       | TETE ROUSSE       | FR      | 45.85 N | 6.82 E  |       |     |    |           |      |      |             |           | F               |
| GERMANY   |                   |         |         |         |       |     |    |           |      |      |             |           |                 |
| 214       | HOELLENTAL        | DE0003  | 47.42 N | 10.99 E | 5-4-8 | NE  | NE | 2569      | 2356 | 2202 | 0.247       | 0.81      | D               |
| 215       | SCHNEEFERNER N    | DE0001  | 47.41 N | 10.97 E | 6-4-8 | E   | E  | 2798      | 2635 | 2558 | 0.335       | 0.825     | D               |
| 216       | SCHNEEFERNER S    | DE0002  | 47.40 N | 10.97 E | 6-4-8 | NE  | NE | 2664      | 2587 | 2520 | 0.084       | 0.593     | D               |
| GREENLAND |                   |         |         |         |       |     |    |           |      |      |             |           |                 |
| 217       | AKULLIIT          | GL      | 69.64 N | 54.50 W |       |     |    | 840       |      | 287  | 3.43        | 3.42      | B               |
| 218       | ASSAKAAT          | GL      | 70.52 N | 52.07 W |       |     |    | 1726      |      | 316  | 13.2        | 8.142     | B               |

| NR      | GLACIER NAME       | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|---------|--------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|         |                    |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 219     | FLADE ISBLINK IC   | GL      | 81.20 N | 16.90 W |       |     |    |           |      |      |             |           | D               |
| 220     | FREYA              | GL      | 74.23 N | 20.50 W | 5-2-8 | N   | NW | 1250      |      | 330  | 5.599       | 6 B       |                 |
| 221     | KANGIUSAQ          | GL      | 65.85 N | 52.09 W |       |     |    | 1928      |      | 22   | 8.77        | 5.35 B    |                 |
| 222     | LYNGMARKSBRÆE      | GL      | 69.28 N | 53.55 W |       |     |    | 1000      |      | 600  | 1.7         | 2.186 B   |                 |
| 223     | MITTIVAKKAT        | GL0019  | 65.67 N | 37.83 W | 2-2-3 | SW  | SW | 899       |      | 130  | 30          | 7.5 B     | C               |
| 224     | MOTZFELDT E        | GL      | 61.15 N | 45.03 W |       |     |    | 1600      |      | 1100 | 1.43        | 2.91 B    |                 |
| 225     | MOTZFELDT W        | GL      | 61.13 N | 45.09 W |       |     |    | 1680      |      | 1000 | 6.11        | 4.783 B   |                 |
| 226     | NAPASORSUAQ        | GL      | 60.30 N | 45.27 W |       |     |    | 1050      |      | 500  | 1.97        | 2.97 B    |                 |
| 227     | NARSSAQ BRAE       | GL0005  | 60.99 N | 45.90 W | 6-2-0 | W   | W  | 1300      | 1110 | 900  | 1.43        | 1.6 B     |                 |
| 228     | PETERMANN          | GL      | 80.80 N | 61.10 W |       |     |    |           |      |      |             |           | F               |
| 229     | QINGUA KUJALLE     | GL      | 65.95 N | 51.92 W |       |     |    | 1785      |      | 0    | 57          | 15.421 B  |                 |
| 230     | SAARLOQ            | GL      | 65.87 N | 52.61 W |       |     |    | 1815      |      | 177  | 4.27        | 3.85 B    |                 |
| 231     | SAQQAQ             | GL      | 70.08 N | 51.70 W |       |     |    | 1131      |      | 281  | 8.83        | 6.778 B   |                 |
| 232     | SERMIARSUIT        | GL      | 70.52 N | 52.15 W |       |     |    | 1954      |      | 77   | 20.33       | 11.55 B   |                 |
| 233     | SERMIKASSAK        | GL      | 71.22 N | 53.96 W |       |     |    | 1840      |      | 39   | 22.46       | 15.095 B  |                 |
| 234     | SERMINNGUAQ        | GL      | 66.28 N | 52.40 W |       |     |    | 1850      |      | 10   | 79.07       | 20.847 B  |                 |
| 235     | SERMITISIAQ        | GL      | 60.54 N | 44.16 W |       |     |    | 1500      |      | 50   | 23.8        | 12.469 B  |                 |
| 236     | SISSARISSUT        | GL      | 66.37 N | 52.38 W |       |     |    | 1782      |      | 62   | 19.08       | 8.578 B   |                 |
| 237     | SOQQAAP            | GL      | 70.47 N | 51.88 W |       |     |    | 1633      |      | 394  | 15.46       | 9.644 B   |                 |
| 238     | TUNORSUAQ          | GL      | 69.32 N | 53.36 W |       |     |    | 930       |      | 430  | 3.08        | 2.003 B   |                 |
| 239     | UMIARTORFIUP       | GL      | 70.47 N | 51.98 W |       |     |    | 1729      |      | 97   | 39.9        | 15.817 B  |                 |
| ICELAND |                    |         |         |         |       |     |    |           |      |      |             |           |                 |
| 240     | BAEGISARJOEK.      | IS0304  | 65.59 N | 18.37 W | 5-3-0 | N   | N  | 1300      | 1120 | 960  | 1.7         | 1.4 B     |                 |
| 241     | BLAGNIPUJOEK.      | IS      | 64.72 N | 19.13 W | 4--3  | SW  | SW | 1700      |      | 740  | 51.5        | 11 B      |                 |
| 242     | BREIDAMJ. W. A.    | IS1125A | 64.06 N | 16.40 W | 4-2-4 | E   | SE | 1900      |      | 60   | 160         | 20 B      |                 |
| 243     | BREIDAMJ. W. C.    | IS1125C | 64.17 N | 16.47 W | 4-2-3 | SE  | SE | 1730      |      | 40   | 210         | 30 B      |                 |
| 244     | BROKARJOEKULL      | IS1427  | 64.25 N | 16.12 W | 4-3-3 | S   | SE | 1200      |      | 200  | 5           | 3 B       |                 |
| 245     | BRUARJOEKULL       | IS2400  | 64.67 N | 16.17 W | 4-3-3 | N   | N  | 1800      | 1260 | 590  | 1600        | 54 C      |                 |
| 246     | DYNGJUJOEKULL      | IS2600  | 64.67 N | 17.00 W | 4-2-3 | N   | N  | 200       | 1440 | 720  | 1050        | 46 C      |                 |
| 247     | EYJABAKKAJOEK.     | IS2300  | 64.65 N | 15.58 W | 4-2-3 | N   | NE | 1565      | 1130 | 690  | 110         | 15 C      |                 |
| 248     | EYJAFJALLAJOEK.    | IS0112  | 63.62 N | 19.62 W | 3-3-0 |     |    |           |      |      |             |           | F               |
| 249     | FALLJOEKULL        | IS1021  | 63.98 N | 16.75 W | 4-3-3 | W   | W  | 2000      |      | 140  | 8           | 8 B       |                 |
| 250     | FJALLSJ. B. BREID. | IS1024A | 64.04 N | 16.40 W | 4-3-4 | SE  | E  | 2040      |      | 40   | 45          | 15 B      |                 |
| 251     | FJALLSJ. B. GAML.  | IS1024C | 64.01 N | 16.42 W | 4-3-4 | SE  | E  | 2040      |      | 40   | 48          | 15 B      |                 |
| 252     | FLAAJOEK. E 148    | IS1930C | 64.34 N | 15.54 W |       | SE  | SE | 1520      |      | 50   | 180         | 29 B      |                 |
| 253     | GEITLANDSJOEK.     | IS      | 64.67 N | 20.53 W | 4--3  | W   | W  | 1420      |      | 800  |             | 8 B       |                 |
| 254     | GIGJOEKULL         | IS0112  | 63.67 N | 19.62 W | 4-3-4 | N   | N  | 1640      |      | 200  | 7.5         | 7.5 B     |                 |
| 255     | GLJUFURARJOEK.     | IS0103  | 65.72 N | 18.65 W | 5-4-8 | N   | N  | 1350      |      | 600  | 3           | 2.5 B     |                 |
| 256     | HAGAFELLSJOEK.     | IS0306  | 64.49 N | 20.26 W | 4-3-3 | SW  | SW | 1420      |      | 440  | 105         | 19 B      |                 |
| 257     | HEINABERGSJOEK.    | IS1829A | 64.29 N | 15.67 W | 4--4  | SE  | E  | 1520      |      | 60   | 85          | 25 B      |                 |
| 258     | HOFJSJOEKULL E     | IS0510B | 64.80 N | 18.58 W | 4-3-3 | E   | E  | 1800      | 1185 | 640  | 250         | 19 C      |                 |
| 259     | HOFJSJOEKULL N     | IS0510A | 64.95 N | 18.92 W | 4-3-3 | N   | N  | 1800      | 1250 | 860  | 90.6        | 19.9 C    |                 |
| 260     | HOFJSJOEKULL SW    | IS0510C | 64.72 N | 19.05 W | 4-3-3 | SW  | SW | 1750      | 1205 | 750  | 51          | 13 C      |                 |
| 261     | HYRNINGSJOEK.      | IS0100  | 64.81 N | 23.73 W | 4-3-3 | E   | E  | 1445      |      | 700  | 2           | 2 B       |                 |
| 262     | JOEKULKROKUR       | IS0007  | 64.81 N | 19.81 W | 4-3-3 | NE  | NE | 1450      |      | 740  | 55          | 11 B      |                 |
| 263     | KALDALONJSJOEK.    | IS0102  | 66.12 N | 22.29 W | 4-3-3 | SW  | SW | 900       |      | 140  | 37          | 6 B       |                 |
| 264     | KIRKJUJOEKULL      | IS      | 64.73 N | 19.85 W | 4--3  | SE  | E  | 1450      |      | 700  | 30          | 8 B       |                 |
| 265     | KOELDUKVISLARJ.    | IS2700  | 64.58 N | 17.83 W | 4-3-3 | NW  | NW | 2000      | 1420 | 900  | 310         | 27 C      |                 |
| 266     | KOETLUJOEKULL      | IS      | 63.55 N | 18.82 W | 4--3  | SE  | SE | 1500      |      | 200  | 133         | 23 B      |                 |
| 267     | KVERKJOEKULL       | IS2500  | 64.72 N | 16.65 W | 4-3-3 | N   | NW | 1920      |      | 900  | 29          | 11 B      |                 |
| 268     | KVISLAJOEKULL      | IS      | 64.85 N | 19.16 W | 4--3  | W   | W  | 1700      |      | 820  | 66          | 15 B      |                 |
| 269     | LANGJOEK.S. DO.    | IS      | 64.62 N | 20.30 W |       |     |    | 1440      | 1110 | 430  |             |           | C               |
| 270     | LEIRUFJARDARJ.     | IS0200  | 66.19 N | 22.44 W | 4-3-3 | NW  | NW | 925       |      | 140  | 27          | 6 B       |                 |
| 271     | LODMUNDARJ.        | IS0108  | 64.65 N | 19.19 W |       | N   | N  | 1170      |      | 900  | 1.9         | 2 B       |                 |
| 272     | MORSARJOEKULL      | IS0318  | 64.09 N | 16.94 W | 4-3-3 | SW  | SW | 1380      |      | 180  | 30          | 10 B      |                 |
| 273     | MULAJOEKULL S      | IS0311A | 64.67 N | 18.66 W | 4-3-2 | SE  | SE | 1790      |      | 610  | 70          | 20 B      | F               |
| 274     | NAUTHAGAJOEK.      | IS0210  | 64.65 N | 18.76 W | 4-3-3 | S   | S  | 1780      |      | 630  | 25          | 18 B      |                 |
| 275     | OELDUFELLSJOEK.    | IS0114  | 63.73 N | 18.84 W | 4-3-2 | NE  | E  | 1400      |      | 320  | 40          | 15 B      |                 |
| 276     | REYKJAFJARDARJ.    | IS0300  | 66.20 N | 22.18 W | 4-3-3 | NE  | NE | 925       |      | 100  | 22          | 7 B       |                 |
| 277     | RJUPNABREKKUJ.     | IS      | 64.72 N | 17.56 W | 4--3  | NW  | NW | 1940      |      | 1060 |             | 7 B       |                 |

| NR           | GLACIER NAME        | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|--------------|---------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|              |                     |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 278          | SATUJOEKULL         | IS0530  | 64.92 N | 18.83 W | 4-3-3 | N   | N  | 1790      |      | 860  | 91          | 20        | B               |
| 279          | SIDUJOEK. E M 177   | IS0015B | 64.11 N | 17.74 W | 4-3-2 | SW  | S  | 1720      |      | 590  | 350         | 40        | B               |
| 280          | SKAFTAFELLSJ.       | IS0419  | 64.02 N | 16.90 W | 4-2-3 | SW  | SW | 1900      |      | 100  | 85          | 18        | B               |
| 281          | SKALAFELLSJOEK.     | IS1728A | 64.27 N | 15.67 W | 4-3-3 | SE  | E  | 1400      |      | 60   | 100         | 25        | B               |
| 282          | SKEIDARARJ. E1      | IS0117A | 64.03 N | 17.09 W | 4-3-2 | S   | S  | 1725      |      | 100  | 850         | 50        | B               |
| 283          | SKEIDARARJ. E2      | IS0117B | 64.01 N | 17.11 W | 4-3-2 | S   | S  | 1725      |      | 100  | 850         | 50        | B               |
| 284          | SKEIDARARJ. E3      | IS0117C | 64.01 N | 17.14 W | 4-3-2 | S   | S  | 1725      |      | 100  | 850         | 50        | B               |
| 285          | SKEIDARARJ. M       | IS      | 63.99 N | 17.22 W | 4-3   | S   | S  | 1720      |      | 80   | 530         | 45        | B               |
| 286          | SKEIDARARJ. W       | IS0116  | 64.01 N | 17.37 W | 4-3-2 | S   | S  | 1720      |      | 100  | 530         | 45        | B               |
| 287          | SLETTJOEKULL        | IS      | 63.77 N | 19.20 W | 4-3   | NW  | NW | 1380      |      | 640  | 100         | 11        | B               |
| 288          | SOLHEIMAJ. W        | IS0113A | 63.53 N | 19.37 W | 4-3-3 | SW  | SW | 1500      |      | 110  | 44          | 15        | B               |
| 289          | SVINAFELLSJOEK.     | IS0520A | 63.99 N | 16.88 W | 4-2-3 | W   | SW | 2110      |      | 120  | 24          | 12        | B               |
| 290          | TUNGNAARJOEK.       | IS2214  | 64.32 N | 18.07 W | 4-3-3 | SW  | W  | 1680      | 1220 | 690  | 360         | 39        | B C             |
| <u>INDIA</u> |                     |         |         |         |       |     |    |           |      |      |             |           |                 |
| 291          | CHHOTA SHIGRI       | IN      | 32.20 N | 77.50 E | 5-1-9 | N   | N  | 6263      | 5020 | 4050 | 16.888      | 9         | C D             |
| 292          | CHORABARI           | IN      | 30.76 N | 79.06 E |       |     |    |           |      |      |             |           | B               |
| 293          | DRANG DRUNG         | IN      | 33.75 N | 76.29 E |       |     |    |           |      |      |             |           | B               |
| 294          | GANGOTRI            | IN0019  | 30.90 N | 79.09 E |       |     |    |           |      |      |             |           | B               |
| 295          | GANGSTANG           | IN0077  | 32.20 N | 77.30 E |       |     |    |           |      |      |             |           | B               |
| 296          | GLACIER NO. 10      | IN      | 33.82 N | 76.29 E |       |     |    |           |      |      |             |           | B               |
| 297          | GLACIER NO. 12      | IN      | 33.71 N | 76.35 E |       |     |    |           |      |      |             |           | B               |
| 298          | GLACIER NO. 13      | IN      | 33.63 N | 76.32 E |       |     |    |           |      |      |             |           | B               |
| 299          | GLACIER NO. 9       | IN      | 33.81 N | 76.22 E |       |     |    |           |      |      |             |           | B               |
| 300          | HAMTAH              | IN      | 32.24 N | 77.37 E | 5-3-0 | NW  | NW | 4683      | 4452 | 4040 | 3.458       | 5.32      | B C             |
| 301          | MILAM               | IN0037  | 30.52 N | 80.08 E |       |     |    |           |      |      |             |           | B               |
| 302          | MULKILA             | IN0070  | 32.20 N | 77.30 E |       |     |    |           |      | 3825 |             |           | B               |
| 303          | PANCHI NALA I       | IN0046  | 32.20 N | 77.30 E |       |     |    |           |      | 4550 |             |           | B               |
| 304          | PANCHI NALA II      | IN0048  | 32.20 N | 77.30 E |       |     |    |           |      | 4315 |             |           | B               |
| 305          | PARKACHICK          | IN      | 34.03 N | 76.00 E |       |     |    |           |      |      |             |           | B               |
| 306          | TINGAL GOH          | IN0088  | 32.20 N | 77.30 E |       |     |    |           |      |      |             |           | B               |
| 307          | YOCHE LUNGPA        | IN0079  | 32.20 N | 77.30 E |       |     |    |           |      | 3975 |             |           | B               |
| <u>IRAN</u>  |                     |         |         |         |       |     |    |           |      |      |             |           |                 |
| 308          | ALMAKOUH            | IR      | 36.40 N | 50.98 E | 5-2-9 | NE  | NE | 4835      |      | 3197 | 3.7         |           | D               |
| <u>ITALY</u> |                     |         |         |         |       |     |    |           |      |      |             |           |                 |
| 309          | AGNELLO MER.        | IT0029  | 45.15 N | 6.90 E  | 6-4-0 | NE  | NE | 3200      | 3010 | 3020 | 0.5         | 1.45      | B               |
| 310          | ALTA V. / HOHENF.   | IT0730  | 46.46 N | 10.68 E | 5-3-8 | NE  | N  | 3350      | 3059 | 2690 | 1.75        | 2         | B               |
| 311          | AMOLA               | IT0644  | 46.20 N | 10.72 E | 6-3-0 | E   | E  | 3120      | 2785 | 2510 | 0.86        | 1.8       | B               |
| 312          | ANTELAO IN. OCC.    | IT0967  | 46.45 N | 12.27 E | 6-4-0 | N   | N  | 2800      | 2472 | 2340 | 0.2         | 0.85      | B               |
| 313          | ANTELAO SUP.        | IT0966  | 46.45 N | 12.27 E | 6-3-0 | N   | NE | 3130      | 2465 | 2510 | 0.37        | 1.3       | B               |
| 314          | AOUILLE             | IT0138  | 45.52 N | 7.15 E  | 6-4-  |     |    | 3350      |      | 3080 | 0.25        | 0.8       | B               |
| 315          | BASEI               | IT0064  | 45.48 N | 7.12 E  | 6-0-0 | NE  | NE | 3320      |      | 2950 | 0.37        | 0.8       | B               |
| 316          | BELVEDERE (M.)      | IT0325  | 45.95 N | 7.91 E  | 5-2-5 | NE  | NE | 4520      |      | 1780 | 5.58        | 6.05      | B               |
| 317          | BESSANESE           | IT0040  | 45.30 N | 7.12 E  | 5-3-2 | SE  | SE | 3210      |      | 2585 | 1.04        | 2.55      | B               |
| 318          | BRENVA              | IT0219  | 45.83 N | 6.90 E  | 5-2-8 | SE  | E  | 4810      | 3100 | 2450 | 8.06        | 7.64      | B               |
| 319          | CALDERONE           | IT1006  | 42.47 N | 13.62 E | 6-4-0 | NE  | NE | 2830      | 2730 | 2650 | 0.036       | 0.3       | B C D F         |
| 320          | CAMPO SETT.         | IT0997  | 46.42 N | 10.11 E |       |     |    | 3180      |      | 2840 | 0.323       | 1         | B C D           |
| 321          | CARE ALTO OR.       | IT0632  | 46.11 N | 10.61 E | 6-7-6 |     |    | 3220      |      | 3050 | 0.27        | 0.5       | B               |
| 322          | CARESER             | IT0701  | 46.45 N | 10.70 E | 6-3-8 | S   | S  | 3278      | 3079 | 2881 | 1.886       | 1600      | B C             |
| 323          | CARESER CENT.       | IT      | 46.45 N | 10.69 E | 6-9-8 | SE  | SE | 3112      | 3005 | 2921 | 0.241       | 1130      | C               |
| 324          | CARESER OCC.        | IT      | 46.45 N | 10.69 E | 6-4-8 | SE  | SE | 3278      | 3149 | 3094 | 0.194       | 670       | C               |
| 325          | CARESER OR.         | IT      | 46.45 N | 10.70 E | 6-3-8 | S   | S  | 3267      | 3079 | 2881 | 1.432       | 1600      | C               |
| 326          | CASPOGGIO           | IT0435  | 46.34 N | 9.91 E  | 6-4-8 | NW  | NW | 2985      | 2800 | 2725 | 0.84        | 1.1       | B               |
| 327          | CASSANDRA OR.       | IT0411  | 46.26 N | 9.76 E  | 5-2-  |     |    | 3100      |      | 2915 | 0.4         | 1.8       | B               |
| 328          | CASTELLI OR.        | IT0493  | 46.45 N | 10.55 E | 6-4-  |     |    | 3050      |      | 2808 | 0.4         | 0.8       | B               |
| 329          | CEDEC               | IT0503  | 46.45 N | 10.60 E | 5-2-  |     |    | 3780      |      | 2710 | 2.5         | 3         | B               |
| 330          | CEV.FORC./FUERK..   | IT0731  | 46.45 N | 10.65 E | 5-3-8 | E   | NE | 3750      | 3105 | 2670 | 2.52        | 3.5       | B               |
| 331          | CEV. PRINC./ZUF.F.. | IT0732  | 46.46 N | 10.63 E | 5-3-8 | E   | E  | 3700      | 3078 | 2650 | 3.2         | 3.7       | B               |
| 332          | CIAMARELLA          | IT0043  | 45.33 N | 7.13 E  | 6-4-  |     |    | 3400      |      | 3095 | 0.7         | 0.9       | B               |

| NR  | GLACIER NAME       | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|-----|--------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|     |                    |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 333 | CIARDONEY          | IT0081  | 45.52 N | 7.40 E  | 6-3-9 | NE  | E  | 3130      |      | 2870 | 0.833       | 1.7       | B C             |
| 334 | CLAPIER            | IT0001  | 44.11 N | 7.42 E  | 6-4-8 |     |    | 2750      |      | 2590 | 0.3         | 0.3       | B               |
| 335 | COL D.MARE I       | IT0506A | 46.42 N | 10.61 E | 5-3-  |     |    | 3700      |      | 2890 | 1           | 2.5       | B               |
| 336 | COLLALTO/H.G.A.F.  | IT0927  | 46.93 N | 12.15 E | 6-3-8 | NW  | NW | 3380      | 2955 | 2550 | 2.57        | 2.1       | B               |
| 337 | COLLER. D'ARNAS    | IT0042  | 45.32 N | 7.12 E  |       |     |    | 3400      |      | 2950 |             |           | B               |
| 338 | COUPE DE MONEY     | IT0109  | 45.53 N | 7.38 E  | 6-4-  |     |    | 3600      |      | 2725 | 1.54        | 2         | B               |
| 339 | CRISTALLO          | IT0937  | 46.58 N | 12.21 E | 6-0-0 | N   | N  | 3000      | 2510 | 2330 | 0.32        | 1.05      | B               |
| 340 | DISGRAZIA          | IT0419  | 46.28 N | 9.74 E  |       |     |    | 3000      |      | 2620 |             |           | B               |
| 341 | DOSEGU             | IT0512  | 46.37 N | 10.55 E | 5-2-6 | SW  | SW | 3670      | 3260 | 2862 | 3.3         | 2.8       | B               |
| 342 | DZASSET            | IT0113  | 45.54 N | 7.27 E  |       |     |    | 3750      |      | 2950 |             |           | B               |
| 343 | ESTELLETTTE        | IT0208  | 45.77 N | 6.82 E  | 6-3-9 |     |    | 3150      |      | 2550 | 0.54        | 1.3       | B               |
| 344 | FOND OCCID.        | IT0146  | 45.48 N | 7.07 E  |       |     |    | 3000      |      | 2710 |             |           | B               |
| 345 | FOND OR.           | IT0145  | 45.47 N | 7.08 E  |       |     |    | 3300      |      | 2720 | 1.15        | 2.1       | B               |
| 346 | FONT. BIANCA/W.    | IT0713  | 46.48 N | 10.77 E | 6-4-0 | E   | E  | 3360      | 3120 | 2867 | 0.437       | 1.151     | B C             |
| 347 | FORNI              | IT0507  | 46.40 N | 10.59 E | 5-2-9 | N   | NW | 3678      | 3150 | 2510 | 20          | 5         | B               |
| 348 | FOURNEAUX          | IT0027  | 45.11 N | 6.84 E  |       |     |    | 3050      |      | 2850 | 0.04        | 0.6       | B               |
| 349 | FRADUSTA           | IT0950  | 46.25 N | 11.87 E | 6-0-0 | N   | N  | 2936      | 2730 | 2642 | 0.43        | 0.95      | B               |
| 350 | GLIAIRETTA VAUD.   | IT0168  | 45.51 N | 7.02 E  | 5--   |     |    | 3300      |      | 2700 | 3.6         | 3.6       | B               |
| 351 | GOLETTA            | IT0148  | 45.50 N | 7.05 E  | 5-2-0 | N   | N  | 3290      | 3055 | 2760 | 3.02        | 2.4       | B               |
| 352 | GRAN PIL./GLIED.F. | IT0893  | 46.97 N | 11.72 E | 5-3-8 | SW  | W  | 3370      | 2935 | 2500 | 2.62        | 3.7       | B               |
| 353 | GRAN VAL           | IT0115  | 45.56 N | 7.29 E  |       |     |    |           |      |      |             |           | B               |
| 354 | GR, VEDR, OCC./HF. | IT0884  | 46.98 N | 11.71 E |       |     |    |           |      |      |             |           | B               |
| 355 | GR, VEDR, OR./GF.  | IT0883  | 46.98 N | 11.72 E |       |     |    |           |      |      |             |           | B               |
| 356 | GRAN ZEBRU         | IT0502  | 46.47 N | 10.57 E |       |     |    | 3400      |      | 2930 | 1.02        | 1.8       | B               |
| 357 | GR, CROUX CENT.    | IT0111  | 45.52 N | 7.31 E  |       |     |    | 3300      |      | 2560 | 2           | 2.1       | B               |
| 358 | GRAND ETRET        | IT0134  | 45.48 N | 7.22 E  | 5-2-  |     |    | 3100      |      | 2450 | 0.75        | 1.3       | B C             |
| 359 | GRUETTA ORIENT.    | IT0232  | 45.90 N | 7.03 E  |       |     |    |           |      |      |             |           | B               |
| 360 | INDREN OCC.        | IT0306  | 45.89 N | 7.86 E  | 5-3-  |     |    | 4100      |      | 3050 | 1.68        | 2.5       | B               |
| 361 | JUMEAUX            | IT0280  | 45.94 N | 7.60 E  |       |     |    | 2850      |      | 2680 |             |           | B               |
| 362 | LA MARE (VED.DE)   | IT0699  | 46.43 N | 10.63 E | 5-2-5 | E   | E  | 3769      | 3260 | 2625 | 4.75        | 3.5       | B               |
| 363 | LANA/A. LAHN. K.   | IT0913  | 47.07 N | 12.21 E | 5-2-9 | NW  | NW | 3480      | 2720 | 2310 | 1.69        | 2.9       | B               |
| 364 | LARES              | IT0634  | 46.13 N | 10.60 E | 6-7-6 | E   | NE | 3463      | 3023 | 2600 | 6.24        | 3.7       | B               |
| 365 | LAUSON             | IT0116  | 45.56 N | 7.28 E  | 6-4-0 | N   | N  | 3370      | 3100 | 2965 |             | 1.05      | B               |
| 366 | LAVACCIU           | IT0129  | 45.52 N | 7.25 E  | 5-2-  |     |    | 3770      |      | 2810 | 1.83        | 2.6       | B               |
| 367 | LAVASSEY           | IT0144  | 45.48 N | 7.11 E  | 6-4-  |     |    | 3130      |      | 2700 | 1.5         | 1.9       | B               |
| 368 | LOBBIA             | IT0637  | 46.16 N | 10.58 E | 5-3-0 | N   | N  | 3438      | 2968 | 2620 | 5.4         | 1.8       | B               |
| 369 | LOCCE SETT.        | IT0321  | 45.93 N | 7.92 E  |       |     |    |           |      |      |             |           | B               |
| 370 | LUNGA/LANGENF.     | IT0733  | 46.47 N | 10.62 E | 5-2-9 | NE  | E  | 3390      | 3120 | 2670 | 1.776       | 2.7       | B C             |
| 371 | LUPO               | IT0543  | 46.08 N | 9.99 E  | 6-4-  |     |    | 2760      |      | 2435 | 0.202       | 0.7       | B C D           |
| 372 | LYS                | IT0304  | 45.90 N | 7.83 E  | 5-1-5 | SW  | SW | 4530      | 3732 | 2355 | 11.83       | 5.6       | B               |
| 373 | MALAAVALE/U.T.F.   | IT0875  | 46.95 N | 11.12 E | 5-1-5 | E   | E  | 3470      | 2950 | 2550 | 7.198       | 4.02      | B C             |
| 374 | MANDRONE           | IT0639  | 46.17 N | 10.55 E | 5-2-0 | NE  | NE | 3436      | 3022 | 2530 | 12.38       | 5.38      | B               |
| 375 | MARMOLADA C.       | IT0941  | 46.44 N | 11.87 E | 6-0-6 | N   | N  | 3340      | 2825 | 2720 | 2.6         | 1.5       | B               |
| 376 | MAROVIN            | IT0541  | 46.08 N | 10.00 E |       |     |    | 2450      |      | 2060 |             |           | B               |
| 377 | MARTELOT           | IT0049  | 45.38 N | 7.17 E  | 6-5-  |     |    | 2860      |      | 2450 | 0.23        | 0.8       | B               |
| 378 | MONCIAIR           | IT0132  | 45.49 N | 7.24 E  | 6-5-  |     |    | 3230      |      | 2850 | 0.53        | 0.7       | B               |
| 379 | MONCORVE           | IT0131  | 45.50 N | 7.25 E  | 6-2-2 | NW  | NW | 3642      | 3158 | 2900 | 2.23        | 1.5       | B               |
| 380 | MONEY              | IT0110  | 45.53 N | 7.34 E  | 5-2-  |     |    | 3600      |      | 2515 | 1.86        | 2.6       | B               |
| 381 | MONTANDEYNE        | IT0128  | 45.54 N | 7.26 E  | 6-4-  |     |    | 3400      |      | 3100 | 1.22        | 1.3       | B               |
| 382 | MORION OR.         | IT0180  | 45.63 N | 7.03 E  | 5-3-  |     |    | 3250      |      | 2720 | 0.9         | 2.1       | B               |
| 383 | MULINET MERID.     | IT0047  | 45.36 N | 7.17 E  |       |     |    | 3010      |      | 2535 |             |           | B               |
| 384 | MULINET SETT.      | IT0048  | 45.37 N | 7.17 E  | 6-4-  |     |    | 2920      |      | 2690 | 0.18        | 0.5       | B               |
| 385 | NARDIS OCC.        | IT0640  | 46.21 N | 10.66 E | 5-3-0 | SE  | SE | 3500      | 3160 | 2790 | 1.67        | 2.55      | B               |
| 386 | NEL CENTRALE       | IT0057  | 45.42 N | 7.17 E  | 6-5-  |     |    | 3200      |      | 2600 | 1.06        | 1.5       | B               |
| 387 | NEVES OR./N-F. O.  | IT0902  | 46.98 N | 11.80 E | 6-3-8 | S   | S  | 3300      | 2990 | 2655 | 2.27        | 2.2       | B               |
| 388 | NISCLI             | IT0633  | 46.11 N | 10.61 E | 6-3-0 | E   | E  | 3200      | 2783 | 2590 | 0.66        | 1.5       | B               |
| 389 | PAL D.MAR. LOB.C.  | IT0506B | 46.41 N | 10.60 E |       |     |    | 3704      |      |      |             |           | B               |
| 390 | PAL D.MAR. LOB.O.  | IT0506C | 46.41 N | 10.60 E |       |     |    |           |      |      |             |           | B               |
| 391 | PEIRABROC          | IT0002  | 44.12 N | 7.41 E  | 6-4-  |     |    | 2700      |      | 2580 | 0.1         | 0.1       | B               |
| 392 | PENDENTE/HA.F.     | IT0876  | 46.96 N | 11.23 E | 5-2-0 | S   | S  | 2950      | 2777 | 2630 | 0.852       | 1.35      | B C             |
| 393 | PIODE              | IT0312  | 45.91 N | 7.88 E  | 5-2-0 | SE  | SE | 4436      | 3120 | 3470 | 2.55        | 2.65      | B               |



| NR                 | GLACIER NAME        | PSFG NR | LAT     | LON      | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|--------------------|---------------------|---------|---------|----------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|                    |                     |         |         |          |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 394                | PISGANA OCC.        | IT0577  | 46.19 N | 10.52 E  | 5-3-7 | N   | NE | 3320      | 3000 | 2570 | 3.36        | 2.8       | B               |
| 395                | PIZZO FERRE         | IT0365  | 46.47 N | 9.28 E   | 5-3-  |     |    | 2990      |      | 2700 | 0.9         | 1.8       | B               |
| 396                | PIZZO SCALINO       | IT0443  | 46.28 N | 9.98 E   | 6-3-6 | N   | N  | 3100      | 2920 | 2585 | 1.94        | 2.1       | B               |
| 397                | PRE DE BAR          | IT0235  | 45.91 N | 7.04 E   | 5-2-0 | SE  | SE | 3750      | 3095 | 2089 | 3.53        | 3.93      | B               |
| 398                | PREDAROSSA          | IT0408  | 46.26 N | 9.74 E   | 5-3-  |     |    | 3400      |      | 2625 | 0.88        | 2.5       | B               |
| 399                | QUAIRA B./ WKF.     | IT0889  | 46.55 N | 10.86 E  | 5-2-0 | SW  | SW | 3509      | 3132 | 2605 | 1.41        | 2.8       | B               |
| 400                | RIES OCC./RF. W.    | IT0930  | 46.90 N | 12.10 E  | 6-3-6 | N   | N  | 3300      | 2955 | 2610 | 1.975       | 2.1       | B C             |
| 401                | RIES O.C./RF. O. Z. | IT0929  | 46.90 N | 12.12 E  | 6-4-9 | NW  | N  | 3265      | 2816 | 2535 | 2.57        | 2.1       | B               |
| 402                | ROSIM / ROSIMF.     | IT0754  | 46.53 N | 10.64 E  | 6-3-0 | NW  | W  | 3405      | 3215 | 2940 | 0.78        | 1.5       | B               |
| 403                | ROSSO DESTRO        | IT0920  | 47.03 N | 12.20 E  | 5-3-6 | W   | W  | 3285      | 2838 | 2520 | 0.88        | 1.7       | B               |
| 404                | RUTOR               | IT0189  | 45.50 N | 7.00 E   | 5-2-0 | N   | NW | 3460      | 2998 | 2480 | 9.54        | 4.8       | B               |
| 405                | SCERSCEN INF.       | IT0432  | 46.35 N | 9.85 E   | 5-2-  |     |    | 3400      |      | 2645 | 7           | 4.5       | B               |
| 406                | SEA                 | IT0046  | 45.34 N | 7.14 E   | 5-3-  |     |    | 3020      |      | 2710 | 0.62        | 1.9       | B               |
| 407                | SFORZELLINA         | IT0516  | 46.35 N | 10.51 E  | 6-4-8 | NW  | NW | 3120      | 2925 | 2795 | 0.4         | 0.7       | B               |
| 408                | SISSONE             | IT0422  | 46.30 N | 9.72 E   |       |     |    | 3100      |      | 2625 |             |           | B               |
| 409                | SOCHES TSANTEL.     | IT0147  | 45.49 N | 7.07 E   | 6-4-  |     |    | 3450      |      | 2720 | 3.4         | 3.5       | B               |
| 410                | SOLDA / SULDENF.    | IT0762  | 46.49 N | 10.57 E  | 5-2-7 | NE  | NE | 3900      | 2908 | 2410 | 6.48        | 4.2       | B               |
| 411                | SURETTA MERID.      | IT0371  | 46.51 N | 9.36 E   |       |     |    | 2925      |      | 2685 | 0.181       | 0.8       | B C D           |
| 412                | TORRENT             | IT0155  | 45.58 N | 7.09 E   |       |     |    | 3100      |      | 2660 |             |           | B               |
| 413                | TOULES              | IT0221  | 45.83 N | 6.93 E   | 6-4-0 | SE  | SE | 3500      | 3050 | 2679 | 0.93        | 1.65      | B               |
| 414                | TRAVIGNOLO          | IT0947  | 46.29 N | 11.82 E  | 6-4-7 | N   | N  | 2850      | 2520 | 2330 | 0.28        | 0.9       | B               |
| 415                | TRIBOLAZIONE        | IT0112  | 45.52 N | 7.28 E   | 6-4-  |     |    | 3870      |      | 2785 | 5.78        | 2.1       | B               |
| 416                | TZA DE TZAN         | IT0259  | 45.98 N | 7.57 E   | 5-2-0 | SE  | S  | 3810      | 3285 | 2530 | 3.95        | 3.7       | B               |
| 417                | VAL VIOLA OCC.      | IT0477  | 46.39 N | 10.17 E  | 6-5-  |     |    | 3260      |      | 2770 | 0.19        | 1.1       | B               |
| 418                | VALLE DEL VENTO     | IT0919  | 47.04 N | 12.20 E  | 5-3-8 | NW  | NW | 3050      | 2710 | 2445 | 0.36        | 1.2       | B               |
| 419                | VALTOURNANCHE       | IT0289  | 45.93 N | 7.70 E   | 4-2-2 | W   | W  | 3695      | 3315 | 3000 | 1.68        | 2         | B               |
| 420                | VAUDALETTA          | IT0142  | 45.52 N | 7.14 E   |       |     |    |           |      |      |             |           | B               |
| 421                | VENEROCOLO          | IT0581  | 46.16 N | 10.51 E  | 5-3-9 | NW  | N  | 3280      | 2810 | 2570 | 1.5         | 2.2       | B               |
| 422                | VENTINA             | IT0416  | 46.27 N | 9.77 E   | 5-3-6 | NE  | N  | 3500      | 2790 | 2230 | 2.37        | 3.7       | B               |
| 423                | VERRA (GR. DI)      | IT0297  | 45.92 N | 7.75 E   | 5-2-  |     |    | 4000      |      | 2614 | 6.11        | 5.2       | B               |
| 424                | ZAI DI DEN./Z.F. I. | IT0749  | 46.56 N | 10.64 E  | 6-5-0 | NW  | W  | 3314      | 3117 | 2960 | 0.45        | 1.1       | B               |
| 425                | ZAI DI FUO./Z.F. A. | IT0751  | 46.54 N | 10.64 E  | 6-5-7 | NW  | NW | 3475      | 2995 | 2830 | 0.61        | 1         | B               |
| 426                | ZAI DI MEZ./Z.F. M. | IT0750  | 46.55 N | 10.64 E  | 6-0-0 | NW  | W  | 3520      | 3020 | 2880 | 0.72        | 1.4       | B               |
| <u>JAPAN</u>       |                     |         |         |          |       |     |    |           |      |      |             |           |                 |
| 427                | HAMAGURI YUKI       | JP0001  | 36.60 N | 137.62 E | 7-3-0 | NE  | NE | 2720      |      | 2690 | 0.003       | 0.07      | C F             |
| <u>KENYA</u>       |                     |         |         |          |       |     |    |           |      |      |             |           |                 |
| 428                | LEWIS               | KE0008  | 0.15 S  | 37.30 E  | 5-3-3 | SW  | SW | 4871      | 4804 | 4651 | 0.21        | 0.58      | B D             |
| <u>NEPAL</u>       |                     |         |         |          |       |     |    |           |      |      |             |           |                 |
| 429                | AMA DABLAM          | NP      | 27.88 N | 86.88 E  | 5-2-7 | N   | W  |           |      |      | 2.2         |           | D               |
| 430                | AMPHU LAPTSE        | NP      | 27.88 N | 86.94 E  | 5-2-7 | N   | N  |           |      |      | 1.5         |           | D               |
| 431                | AX010               | NP0005  | 27.70 N | 86.57 E  | 6-3-6 | E   | SE | 5302      | 5220 | 4968 | 0.42        | 1.5       | D               |
| 432                | CHANGRI NUP/SH.     | NP      | 27.98 N | 86.81 E  | 5-2-7 | S   | SE |           |      |      | 13          |           | D               |
| 433                | CHUKHUNG            | NP      | 27.88 N | 86.90 E  | 6-8-6 | NW  | NW |           |      |      | 3.8         |           | D               |
| 434                | DUWO                | NP      | 27.88 N | 86.86 E  | 5-2-7 | NW  | NW |           |      |      | 1           |           | D               |
| 435                | KHUMBU              | NP      | 27.95 N | 86.82 E  | 5-2-7 | W   | SW |           |      |      | 17          |           | D               |
| 436                | LHOTSE              | NP      | 27.92 N | 86.92 E  | 5-2-7 | SW  | W  |           |      |      | 6.5         |           | D               |
| 437                | LHOTSE NUP          | NP      | 27.94 N | 86.89 E  | 5-2-7 | S   | S  |           |      |      | 1.95        |           | D               |
| 438                | LHOTSE SH. / IMJA   | NP      | 27.90 N | 86.94 E  | 5-2-4 | W   | W  | 5800      | 5200 | 5055 | 10.7        | 8.4       | B D             |
| 439                | NUPTSE              | NP      | 27.93 N | 86.87 E  | 5-2-7 | SW  | S  |           |      |      | 4           |           | D               |
| 440                | RIKHA SAMBA         | NP0012  | 28.83 N | 83.50 E  | 5-3-8 | S   | SE | 6229      | 5650 | 5346 | 4.8         | 6.2       | D               |
| 441                | ROLWALING (TRK.)    | NP      | 27.86 N | 86.54 E  | 5-2-9 | S   | NW | 6200      | 5502 | 4548 |             |           | B               |
| 442                | THULAGI             | NP0013  | 28.48 N | 84.50 E  | 5-1-9 | SW  | W  | 6500      | 5000 | 4084 |             | 5.38      | B               |
| 443                | YALA                | NP0004  | 28.25 N | 85.62 E  | 6-3-6 | SW  | SW | 5642      | 5400 | 5086 | 1.88        | 1.5       | D               |
| <u>NEW ZEALAND</u> |                     |         |         |          |       |     |    |           |      |      |             |           |                 |
| 444                | ADAMS               | NZ      | 43.32 S | 170.72 E | 5-1-8 | W   | N  | 2470      | 1880 | 1295 | 9.96        | 6.6       | B               |
| 445                | AILS A              | NZ      | 44.78 S | 166.19 E | 6-4-4 | S   | S  | 1830      | 1640 | 1555 |             | 0.7       | F               |
| 446                | ALMER/SALISB.       | NZ      | 43.47 S | 170.22 E | 5-1-8 | W   | SW | 2390      | 1865 | 1340 | 3.1         | 2.98      | B F             |

| NR  | GLACIER NAME    | PSFG NR | LAT     | LON      | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|-----|-----------------|---------|---------|----------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|     |                 |         |         |          |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 447 | ANDY            | NZ      | 44.43 S | 168.37 E | 4-1-8 | N   | N  | 2190      | 1750 | 840  | 10.49       | 7.1       | B               |
| 448 | ASHBURTON       | NZ      | 43.37 S | 170.97 E | 5-3-9 | S   | S  | 2590      | 2085 | 1575 | 1.69        | 2.5       | B               |
| 449 | AVOCA           | NZ      | 43.05 S | 171.40 E | 6-7-6 | E   | E  | 2080      | 1985 | 1890 | 0.12        | 0.36      | F               |
| 450 | AXIUS           | NZ      | 44.17 S | 168.98 E | 6-4-8 | W   | W  | 2285      | 1920 | 1555 | 0.566       | 1.3       | B               |
| 451 | BALFOUR         | NZ      | 43.55 S | 170.12 E | 5-3-9 | W   | W  | 3305      | 1525 | 730  | 7           | 9.9       | B               |
| 452 | BARLOW          | NZ      | 43.30 S | 170.63 E | 6-2-9 | W   | W  | 2440      | 1705 | 1220 | 2.57        | 3.8       | B               |
| 453 | BARRIER         | NZ      | 44.42 S | 168.36 E | 6-2-8 | S   | W  | 2285      | 1860 | 1370 | 1.885       | 2.85      | B               |
| 454 | BARRIER PK      | NZ      | 44.83 S | 167.77 E | 6-7-6 | E   | E  | 1890      | 1706 | 1525 | 0.03        | 0.7       | B               |
| 455 | BLAIR           | NZ      | 43.95 S | 169.72 E | 6-7-8 | SE  | SE | 2240      | 2015 | 1790 | 0.38        | 0.63      | F               |
| 456 | BONAR           | NZ      | 44.40 S | 168.72 E | 6-2-4 | SW  | W  | 3025      | 2090 | 1160 | 15.41       | 7.9       | B               |
| 457 | BREWSTER        | NZ      | 44.07 S | 169.43 E | 6-3-8 | SW  | SW | 2390      | 2023 | 1655 | 2.541       | 2.69      | B C             |
| 458 | BROWNING        | NZ      | 42.92 S | 171.27 E | 6-4-8 | S   | S  | 1675      | 1630 | 1585 |             | 0.1       | F               |
| 459 | BRYANT          | NZ      | 44.83 S | 168.28 E | 6-3-8 | E   | E  | 2225      | 1785 | 1675 |             | 1         | F               |
| 460 | BURTON          | NZ      | 43.45 S | 170.32 E | 5-2-9 | N   | NW | 3115      | 2120 | 1130 | 6.74        | 6.35      | B               |
| 461 | BUTLER          | NZ      | 43.25 S | 170.93 E | 6-2-6 | E   | SE | 2040      | 1860 | 1680 | 0.76        | 0.66      | B               |
| 462 | CAMERON         | NZ      | 43.33 S | 171.00 E | 6-2-9 | SW  | SE | 2470      | 1980 | 1380 | 1.97        | 3.1       | B               |
| 463 | CARIA           | NZ      | 44.38 S | 168.52 E | 6-4-8 | SE  | SE | 1525      | 1435 | 1400 | 0.3         | 0.2       | F               |
| 464 | CAROLINE        | NZ      | 45.98 S | 167.19 E | 7-5-6 | SE  | SE | 1675      | 1495 | 1265 |             | 0.35      | F               |
| 465 | CARRINGTON      | NZ      | 42.92 S | 171.48 E | 6-4-8 | S   | S  | 1960      | 1778 | 1595 | 0.12        | 0.71      | F               |
| 466 | CHANCELLOR      | NZ      | 43.51 S | 170.13 E | 6-4-8 | SW  | SW | 1860      | 1750 | 1585 |             | 0.65      | F               |
| 467 | COLIN CAMPBELL  | NZ      | 43.32 S | 170.72 E | 5-3-9 | S   | E  | 2500      | 1815 | 1130 | 3.94        | 3.65      | B               |
| 468 | CROW            | NZ      | 42.92 S | 171.50 E | 6-3-6 | SE  | S  | 2210      | 1940 | 1675 | 0.47        | 1.2       | B               |
| 469 | DAINTY          | NZ      | 43.23 S | 170.89 E | 6-4-8 | W   | W  | 2330      | 2040 | 1750 | 0.565       | 1.45      | B               |
| 470 | DART            | NZ      | 44.45 S | 168.60 E | 5-3-9 | SW  | SW | 2470      | 1770 | 1070 | 9.85        | 7.6       | B               |
| 471 | DISPUTE         | NZ      | 44.14 S | 168.96 E | 6-4-8 | E   | E  | 1720      | 1660 | 1600 | 0.296       | 0.85      | B               |
| 472 | DONALD          | NZ      | 44.24 S | 168.87 E | 6-2-8 | SW  | NW | 2440      | 1980 | 1525 | 3.635       | 2.85      | B               |
| 473 | DONNE           | NZ      | 44.58 S | 168.02 E | 6-3-8 | E   | SE | 2745      | 1615 | 1220 | 3.52        | 3.6       | B               |
| 474 | DOUGLAS (KAR.)  | NZ      | 43.68 S | 170.00 E | 5-2-4 | SW  | W  | 3160      | 1980 | 960  | 11.76       | 7.4       | B               |
| 475 | ELLA            | NZ      | 42.08 S | 172.58 E | 7-8-6 | E   | E  | 2190      | 2130 | 2060 |             | 0.1       | F               |
| 476 | FAERIE QUEENE   | NZ      | 42.26 S | 172.51 E | 7-8-6 | S   | S  | 2160      | 2040 | 1860 |             | 0.25      | F               |
| 477 | FINDLAY         | NZ      | 44.32 S | 168.45 E | 6-4-8 | S   | S  | 1900      | 1705 | 1435 |             | 0.9       | F               |
| 478 | FITZGERALD (G.) | NZ      | 43.47 S | 170.57 E | 6-3-8 | W   | SW | 2530      | 2165 | 1660 | 1.057       | 1.8       | B               |
| 479 | FOG             | NZ      | 44.52 S | 168.80 E | 6-4-6 | SE  | S  | 2150      | 1995 | 1840 | 0.28        | 0.4       | F               |
| 480 | FORGOTTEN COL   | NZ      | 44.44 S | 168.36 E | 5-2-9 | S   | W  | 2225      | 1800 | 1675 | 0.602       | 1.25      | B               |
| 481 | FOX             | NZ      | 43.53 S | 170.15 E | 5-2-8 | NW  | W  | 3500      | 1900 | 305  | 34.69       | 13.2      | B               |
| 482 | FRANKLIN        | NZ      | 42.87 S | 171.67 E | 6-4-8 | E   | E  | 2010      | 1845 | 1680 | 0.07        | 0.5       | F               |
| 483 | FRANZ JOSEF     | NZ      | 43.50 S | 170.22 E | 5-2-8 | NW  | NW | 2955      | 1690 | 425  | 32.59       | 10.25     | B               |
| 484 | FRESHFIELD      | NZ      | 43.58 S | 170.19 E | 5-2-9 | E   | E  | 2285      | 2010 | 1525 | 0.572       | 1.2       | B               |
| 485 | GENDARME        | NZ      | 44.78 S | 167.94 E | 6-7-6 | S   | S  | 1890      | 1705 | 1525 |             | 0.53      | F               |
| 486 | GLENMARY        | NZ      | 44.00 S | 169.88 E | 6-4-8 | S   | S  | 2350      | 2180 | 2010 | 0.69        | 1.19      | B               |
| 487 | GUNN            | NZ      | 44.76 S | 168.09 E | 6-3-8 | SE  | E  | 1860      | 1615 | 1495 | 0.77        | 1.25      | B               |
| 488 | HORACE WALKER   | NZ      | 43.67 S | 169.97 E | 5-3-8 | W   | SW | 2455      | 2075 | 945  | 5.99        | 6.6       | B               |
| 489 | IRENE           | NZ      | 45.18 S | 167.36 E | 6-4-8 | E   | SE | 1735      | 1585 | 1480 |             | 0.55      | F               |
| 490 | IVORY           | NZ      | 43.13 S | 170.92 E | 6-4-4 | S   | S  | 1730      | 1510 | 1390 | 0.8         | 1.35      | B               |
| 491 | JACK            | NZ      | 43.82 S | 169.63 E | 6-4-6 | W   | W  | 2040      | 1935 | 1860 | 0.14        | 0.34      | F               |
| 492 | JACKSON         | NZ      | 43.88 S | 169.78 E | 6-2-6 | NW  | NW | 2300      | 2110 | 1920 | 0.66        | 0.5       | F               |
| 493 | JALF            | NZ      | 43.47 S | 170.15 E | 2-3-8 | NW  | W  | 1985      | 1783 | 1580 | 0.54        | 0.4       | F               |
| 494 | JASPUR          | NZ      | 43.29 S | 170.63 E | 7-8-6 | W   | W  | 2375      | 2210 | 1830 |             | 0.45      | F               |
| 495 | KAHUTEA         | NZ      | 43.02 S | 171.38 E | 6-3-8 | S   | SW | 2300      | 2025 | 1740 | 0.75        | 1.6       | B               |
| 496 | KAIKOURAS       | NZ      | 42.02 S | 173.63 E | 9-3-9 | S   | SE | 2690      | 2380 | 2160 |             | 1.4       | F               |
| 497 | KEA             | NZ      | 43.18 S | 170.80 E | 6-4-8 | S   | S  | 2030      | 1840 | 1650 | 0.98        | 0.95      | F               |
| 498 | LA PEROUSE      | NZ      | 43.57 S | 170.12 E | 5-3-9 | NW  | W  | 3320      | 1980 | 855  | 9.5         | 11.15     | B               |
| 499 | LAMBERT         | NZ      | 43.30 S | 170.75 E | 2-2-4 | E   | NW | 2425      | 1810 | 1190 | 9.32        | 5.15      | B               |
| 500 | LANGDALE        | NZ      | 43.58 S | 170.27 E | 6-4-8 | NW  | NW | 2560      | 2210 | 2075 |             | 0.95      | F               |
| 501 | LARKINS         | NZ      | 44.88 S | 168.48 E | 6-4-6 | SW  | S  | 2210      | 2025 | 1710 |             | 1.45      | F               |
| 502 | LINDSAY         | NZ      | 44.00 S | 169.13 E | 6-7-6 | NW  | NW | 1880      | 1745 | 1610 | 0.02        | 0.57      | F               |
| 503 | LLAWRENNY       | NZ      | 44.65 S | 167.80 E | 6-5-8 | SW  | S  | 1680      | 1495 | 1310 | 0.12        | 0.75      | F               |
| 504 | LYELL           | NZ      | 43.28 S | 170.83 E | 5-2-9 | S   | E  | 2440      | 1720 | 1005 | 10.79       | 6.2       | B               |
| 505 | MACAULAY        | NZ      | 43.49 S | 170.60 E | 6-2-8 | SE  | E  | 2375      | 2040 | 1650 | 0.869       | 1.45      | B               |
| 506 | MARION          | NZ      | 44.47 S | 168.48 E | 6-2-8 | W   | N  | 2470      | 1905 | 1340 | 7.03        | 5.1       | B               |
| 507 | MARMADUKE DIX.  | NZ      | 42.98 S | 171.38 E | 6-4-8 | E   | SE | 2100      | 1858 | 1615 | 0.77        | 1.7       | B               |

| NR            | GLACIER NAME     | PSFG NR | LAT     | LON      | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|---------------|------------------|---------|---------|----------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|               |                  |         |         |          |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 508           | MATHAIAS         | NZ      | 43.18 S | 171.03 E | 6-4-8 | E   | E  | 1740      | 1526 | 1340 |             | 1         | B               |
| 509           | MC COY           | NZ      | 43.32 S | 170.80 E | 5-3-9 | SW  | SE | 2135      | 1800 | 1250 | 1.05        | 2.6       | B               |
| 510           | McKENZIE         | NZ      | 43.95 S | 169.73 E | 6-3-6 | SE  | SE | 2105      | 1980 | 1830 |             | 0.5       | F               |
| 511           | MERRIE           | NZ      | 45.62 S | 167.19 E | 7-8-6 | E   | E  | 1675      | 1525 | 1465 |             | 0.35      | F               |
| 512           | METALILLE        | NZ      | 43.75 S | 170.06 E | 6-3-8 | N   | N  | 2375      | 2180 | 1800 |             | 2.3       | B               |
| 513           | MUELLER          | NZ      | 43.75 S | 170.02 E | 5-2-4 | SE  | SE | 2895      | 1330 | 760  | 18.54       | 13.65     | B               |
| 514           | MURCHISON        | NZ      | 43.52 S | 170.40 E | 5-2-9 | E   | SW | 3155      | 2080 | 1005 | 36.57       | 16.45     | B               |
| 515           | PARK PASS        | NZ      | 44.58 S | 168.23 E | 6-3-8 | S   | S  | 2200      | 1850 | 1500 | 3.02        | 2.63      | B               |
| 516           | REISCHEK         | NZ      | 43.32 S | 171.00 E | 6-3-8 | SW  | SW | 2440      | 2075 | 1615 | 1.72        | 2.65      | B               |
| 517           | RETREAT          | NZ      | 42.97 S | 171.30 E | 6-4-9 | SW  | SW | 1930      | 1750 | 1570 | 0.3         | 1.05      | F               |
| 518           | RICHARDSON       | NZ      | 43.80 S | 169.95 E | 5-3-9 | W   | SW | 2225      | 1525 | 1080 | 3.86        | 5.8       | B               |
| 519           | RIDGE            | NZ      | 43.62 S | 170.37 E | 6-4-6 | S   | S  | 2490      | 2300 | 2110 | 0.84        | 1.04      | F               |
| 520           | ROLLESTON        | NZ      | 42.88 S | 171.52 E | 6-4-6 | SE  | SE | 1900      | 1795 | 1690 | 0.23        | 0.36      | B               |
| 521           | SEPARATION       | NZ      | 43.48 S | 170.58 E | 5-2-9 | S   | SW | 2560      | 2025 | 1495 | 1.538       | 2.65      | B               |
| 522           | SIEGE            | NZ      | 43.27 S | 170.53 E | 5-3-8 | SE  | SE | 2130      | 1750 | 1435 | 1.19        | 3.19      | B               |
| 523           | SLADDEN          | NZ      | 43.76 S | 170.02 E |       |     |    |           |      |      |             |           | B               |
| 524           | SNOW WHITE       | NZ      | 44.45 S | 168.58 E | 5-3-8 | N   | E  | 2425      | 1950 | 1220 | 5.54        | 5.5       | B               |
| 525           | SNOWBALL         | NZ      | 44.45 S | 168.52 E | 6-3-8 | NW  | W  | 2345      | 1905 | 1465 | 3.31        | 2.7       | B               |
| 526           | SNOWY            | NZ      | 44.56 S | 168.60 E | 7-8-6 | W   | W  | 2165      | 2055 | 1905 |             | 0.55      | F               |
| 527           | SOUTH CAMERON    | NZ      | 43.35 S | 170.99 E | 6-3-8 | NE  | NE | 2620      | 2285 | 1980 |             | 1.2       | B               |
| 528           | SPENCER          | NZ      | 43.50 S | 170.28 E | 5-2-9 | W   | N  | 3045      | 1900 | 760  | 10.07       | 7.75      | B               |
| 529           | ST. JAMES        | NZ      | 43.28 S | 170.89 E | 6-2-9 | NE  | E  | 2377      | 1645 | 1035 | 0.981       | 2.8       | B               |
| 530           | ST.MARY          | NZ      | 44.26 S | 169.66 E | 9-3-9 | SE  | SE | 2180      | 1830 | 1705 |             | 0.9       | F               |
| 531           | STOCKING (TEWA.) | NZ      | 43.68 S | 170.07 E | 6-3-8 | SE  | SE |           |      |      |             |           | B               |
| 532           | STRAUCHON        | NZ      | 43.62 S | 170.08 E | 5-3-4 | W   | SW | 2530      | 1745 | 960  | 3.62        | 5.8       | B               |
| 533           | STUART           | NZ      | 44.12 S | 169.27 E | 6-4-6 | SE  | SE | 1860      | 1715 | 1570 | 0.67        | 0.54      | F               |
| 534           | TASMAN           | NZ      | 43.52 S | 170.32 E | 5-2-4 | S   | S  | 3690      | 2210 | 730  | 98.34       | 28.5      | B               |
| 535           | THURNEYSON       | NZ      | 44.17 S | 169.60 E | 6-2-6 | S   | S  | 2425      | 2085 | 1720 | 1.79        | 1.23      | B               |
| 536           | VERTEBRAE 12     | NZ      | 43.32 S | 170.61 E | 6-4-8 | S   | W  | 2090      | 1890 | 1540 |             | 1.2       | F               |
| 537           | VERTEBRAE 20     | NZ      | 43.33 S | 170.59 E | 4-3-8 | S   | S  | 1645      | 1450 | 1160 |             | 1.8       | F               |
| 538           | VICTORIA         | NZ      | 43.50 S | 170.17 E | 5-3-9 | W   | W  | 2560      | 1890 | 1065 | 4.5         | 6.5       | B               |
| 539           | WHATAROA         | NZ      | 43.40 S | 170.53 E | 6-3-8 | W   | SW | 2180      | 1590 | 1005 | 2.973       | 3.35      | B               |
| 540           | WHITBOURNE       | NZ      | 44.47 S | 168.57 E | 5-3-9 | W   | S  | 2575      | 1830 | 1080 | 9.47        | 6.7       | B               |
| 541           | WHITE            | NZ      | 43.00 S | 171.38 E | 6-3-8 | NE  | NE | 2320      | 2015 | 1710 | 0.6         | 1.8       | B               |
| 542           | WHYMPER          | NZ      | 43.48 S | 170.37 E | 5-3-9 | NW  | NE | 2775      | 1780 | 790  | 6.55        | 7.2       | B               |
| 543           | WILKINSON        | NZ      | 43.20 S | 170.93 E | 6-2-4 | NE  | NE | 2286      | 1615 | 945  | 3.95        | 3.8       | B               |
| 544           | WILSON           | NZ      | 42.93 S | 171.68 E | 6-9-6 | S   | S  |           |      |      |             |           | F               |
| 545           | ZORA             | NZ      | 43.75 S | 169.83 E | 6-2-8 | S   | S  | 2455      | 1920 | 1095 | 4.44        | 3.25      | B               |
| <u>NORWAY</u> |                  |         |         |          |       |     |    |           |      |      |             |           |                 |
| 546           | AALFOTBREEN      | NO36204 | 61.75 N | 5.65 E   | 4-3-6 | NE  | NE | 1380      | 1230 | 890  | 3.98        | 2.9       | C               |
| 547           | ALDEGONDABR.     | NO14108 | 77.97 N | 14.09 E  | 5-3-0 | NE  | NE |           |      |      | 7.624       |           | B               |
| 548           | AUSTDALSBREEN    | NO37323 | 61.80 N | 7.35 E   | 4-2-4 | SE  | SE | 1630      | 1480 | 1160 | 10.63       | 5.7       | C               |
| 549           | AUSTERDALSBR.    | NO31220 | 61.62 N | 6.93 E   | 4-3-8 | SE  | SE | 1920      | 1600 | 390  | 26.84       | 8.5       | B               |
| 550           | AU. BROEGGERB..  | NO15504 | 78.88 N | 11.83 E  | 5-2-9 | NW  | N  | 600       | 260  | 60   | 11.8        | 6         | C               |
| 551           | AU. OKSTINDBR.   | NO      | 66.02 N | 14.29 E  |       | N   | E  | 1710      |      | 750  |             | 6         | B               |
| 552           | BERGSETBREEN     | NO31013 | 61.65 N | 7.03 E   | 4-3-8 | SE  | E  |           |      |      |             |           | B               |
| 553           | BLOMSTOELSK.     | NO      | 59.97 N | 6.36 E   |       | SW  | SW | 1636      |      | 1013 | 22.8        |           | B C             |
| 554           | BOEDALSBREEN     | NO37219 | 61.77 N | 7.12 E   | 4-3-8 | NW  | N  |           |      |      |             |           | B               |
| 555           | BOEVERBREEN      | NO0548  | 61.55 N | 8.09 E   |       |     |    |           |      |      |             |           | B               |
| 556           | BOEYABREEN       | NO33014 | 61.53 N | 6.76 E   |       | S   | S  |           |      |      |             |           | B               |
| 557           | BONDHUSBREA      | NO20408 | 60.03 N | 6.33 E   | 4-3-8 | NW  | NW | 1660      | 1450 | 480  | 10.2        | 7.8       | B               |
| 558           | BOTNABREA        | NO20515 | 60.20 N | 6.43 E   | 4-3-8 | W   | W  |           |      |      |             |           | B               |
| 559           | BREIDABLIKKB.R.  | NO      | 60.09 N | 6.40 E   |       | NW  | NW | 1651      |      | 1234 | 3.37        |           | B C             |
| 560           | BRENNDALSB.R.    | NO37109 | 61.68 N | 6.92 E   | 4-3-8 | W   | W  |           |      |      |             |           | B               |
| 561           | BRIKSDALSBREEN   | NO37110 | 61.65 N | 6.92 E   | 4-3-8 | W   | W  | 1910      | 1650 | 350  | 11.94       | 6         | B               |
| 562           | BUERBREEN        | NO21307 | 60.02 N | 6.40 E   | 4-3-8 | E   | NE | 1640      |      | 620  | 15.48       | 7.5       | B               |
| 563           | COMFORTLESSBR.   | NO      | 78.80 N | 12.20 E  |       |     |    |           |      |      |             |           | F               |
| 564           | CORNELIUSSENBR.  | NO      | 66.00 N | 14.37 E  | 5-3-8 | NE  | E  | 1620      |      | 1080 |             | 2.3       | B               |
| 565           | ELISEBREEN       | NO      | 78.64 N | 12.25 E  |       | W   | SW |           |      |      | 10.2        |           | C               |
| 566           | ENGABREEN        | NO67011 | 66.65 N | 13.85 E  | 4-3-8 | N   | NW | 1594      | 1220 | 40   | 38.74       | 11.5      | B C             |

| NR              | GLACIER NAME     | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|-----------------|------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|                 |                  |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 567             | FAABERGSTOELSB   | NO31015 | 61.72 N | 7.23 E  | 4-3-8 | E   | E  | 1810      | 1540 | 760  | 15          | 7         | B               |
| 568             | GRAAFJELLSBREA   | NO      | 60.10 N | 6.40 E  |       | NW  | NW | 1651      |      | 1049 | 8.41        |           | B C             |
| 569             | GRAASUBREEN      | NO0547  | 61.65 N | 8.60 E  | 6-7-6 | NE  | E  | 2300      | 2060 | 1850 | 2.12        | 2.3       | C               |
| 570             | HANSBREEN        | NO12419 | 77.08 N | 15.67 E | 4-2-4 | S   | S  | 510       | 255  | 0    | 56.742      | 15.875    | B C             |
| 571             | HANSEBREEN       | NO36206 | 61.75 N | 5.68 E  |       | NE  | N  | 1320      | 1160 | 925  | 2.75        | 2.5       | C               |
| 572             | HELLSTUGUBR.     | NO0511  | 61.57 N | 8.43 E  | 5-1-8 | N   | N  | 2130      | 1900 | 1470 | 2.9         | 3.4       | B C             |
| 573             | IRENEBREEN       | NO15402 | 78.65 N | 12.10 E |       | NW  | SW | 650       | 340  | 125  | 4.05        | 3.86      | B C             |
| 574             | JUVFONNE         | NO      | 61.68 N | 8.35 E  |       |     |    | 1998      |      | 1840 | 0.171       |           | C               |
| 575             | KJENNDAJSBREEN   | NO37223 | 61.70 N | 7.02 E  | 4-3-8 | N   | N  |           |      |      |             |           | B               |
| 576             | KONGSVEGEN       | NO15510 | 78.80 N | 12.98 E | 4-2-4 | NW  | NW | 1050      | 500  | 0    | 180         | 27        | C               |
| 577             | KOPPANGSBREEN    | NO      | 69.68 N | 20.08 E |       |     |    |           |      |      |             |           | B               |
| 578             | LANGFJORDJOEK.   | NO85008 | 70.12 N | 21.77 E | 4-3-8 | SE  | E  | 1062      | 850  | 300  | 3.21        | 4         | B C             |
| 579             | LEIRBREEN        | NO0548  | 61.57 N | 8.10 E  |       | NW  | NW | 2070      |      | 1530 | 4.87        | 3.8       | B               |
| 580             | LODALS BREEN     | NO31019 | 61.78 N | 7.24 E  |       | E   | SE |           |      |      |             |           | B               |
| 581             | MIDTDALS BREEN   | NO4302  | 60.57 N | 7.47 E  | 4-3-8 | NE  | NE | 1862      |      | 1380 |             |           | B               |
| 582             | MID. LOVENBREEN  | NO15506 | 78.88 N | 12.07 E | 5-2-9 | NE  | N  | 650       | 330  | 50   | 5.2         | 4.8       | C               |
| 583             | NIGARDSBREEN     | NO31014 | 61.72 N | 7.13 E  | 4-3-8 | SE  | SE | 1950      | 1618 | 355  | 47.16       | 9.6       | B C             |
| 584             | REMBESDALSKA.    | NO22303 | 60.53 N | 7.37 E  | 4-3-8 | W   | W  | 1850      | 1740 | 1050 | 17.26       | 8.1       | B C             |
| 585             | STEGHOLTBREEN    | NO31021 | 61.80 N | 7.32 E  | 4-3-8 | S   | S  | 1900      | 1480 | 880  | 15.34       | 7.7       | B               |
| 586             | STEINDALS BREEN  | NO      | 69.39 N | 18.87 E |       | E   | E  |           |      |      |             |           | B               |
| 587             | STORBREEN        | NO0541  | 61.57 N | 8.13 E  | 5-2-6 | NE  | NE | 1970      | 1770 | 1380 | 5.14        | 3         | B C             |
| 588             | ST. SUPHELLEBR.  | NO33014 | 61.52 N | 6.80 E  | 4-0-8 | S   | S  | 1730      |      | 730  | 12          | 7         | B               |
| 589             | STORJUVBREEN     | NO      | 61.65 N | 8.29 E  |       | N   | N  |           |      |      |             |           | B               |
| 590             | STORSTEINSFJELL. | NO7381  | 68.22 N | 17.92 E | 5-2-8 | E   | SE | 1850      | 1380 | 930  | 5.9         | 5.3       | B               |
| 591             | STYGGEDALSR.     | NO30720 | 61.48 N | 7.88 E  | 5-2-6 | N   | N  | 2240      | 1650 | 1270 | 1.81        | 3.2       | B               |
| 592             | SVELGJABREEN     | NO      | 59.98 N | 6.28 E  |       | SW  | SW | 1636      |      | 832  | 22.45       |           | B C             |
| 593             | SYDBREEN         | NO      | 69.45 N | 19.91 E | 5-2-8 | NE  | E  |           |      |      |             |           | B               |
| 594             | TAVLEBREEN       | NO      | 77.95 N | 15.05 E |       |     |    | 750       |      | 200  | 10.9        | 5.974     | B               |
| 595             | TROLLKYRKJEBR.   | NO      | 62.28 N | 7.46 E  |       | NE  | NE |           |      |      |             |           | B               |
| 596             | TUFTEBREEN       | NO      | 61.67 N | 7.14 E  | 4-3-8 | E   | SE |           |      |      |             |           | B               |
| 597             | WALDEMARBREEN    | NO15403 | 78.67 N | 12.00 E | 5-3-8 | NW  | SW | 570       | 320  | 150  | 2.47        | 3.3       | B C             |
| <u>PAKISTAN</u> |                  |         |         |         |       |     |    |           |      |      |             |           |                 |
| 598             | BATURA           | PK0005  | 36.57 N | 74.58 E | 5-3-9 | E   | E  | 7858      | 5236 | 2615 | 330         | 59        | B               |
| 599             | GHULKIN          | PK0008  | 36.45 N | 74.58 E | 5-3-9 | E   | E  | 7683      | 5072 | 2462 |             |           | B               |
| 600             | RAIKOT           | PK      | 35.31 N | 74.61 E |       |     |    |           |      |      |             |           | B               |
| 601             | ALPAMAYO         | PE      | 8.89 S  | 77.65 W | 6-4-4 | SE  | SE | 6026      |      | 4818 |             |           | B               |
| <u>PERU</u>     |                  |         |         |         |       |     |    |           |      |      |             |           |                 |
| 602             | ARTESONRAJU      | PE0003  | 8.95 S  | 77.62 W | 5-3-4 | W   | W  | 5600      | 5070 | 4700 | 4.102       | 3.448     | B C             |
| 603             | CHICON           | PE      | 13.22 S | 72.06 W |       |     |    |           |      |      |             |           | F               |
| 604             | GAJAP-YANACAR.   | PE0009  | 9.83 S  | 77.17 W | 6-3-4 | SE  | SE | 5200      | 5033 | 4958 | 1.2         | 0.789     | B               |
| 605             | HUALCAN          | PE      | 9.20 S  | 77.54 W |       |     |    |           |      |      |             |           | F               |
| 606             | HUASCARAN NOR.   | PE      | 9.10 S  | 77.62 W |       |     |    |           |      |      |             |           | F               |
| 607             | HUASCARAN SE     | PE      | 9.14 S  | 77.58 W |       |     |    |           |      |      |             |           | F               |
| 608             | INCACHIRIASCA    | PE      | 13.35 S | 72.53 W | 6-3-  | S   | SE | 5125      | 4850 | 4625 |             |           | B               |
| 609             | MATARA           | PE      | 9.21 S  | 76.82 W |       |     |    |           |      |      |             |           | F               |
| 610             | PASTORURI        | PE0008  | 9.90 S  | 77.17 W | 6-3-0 | NW  | NW | 5100      | 5095 | 5061 | 1.25        | 0.31      | B               |
| 611             | SHALLAP          | PE0003  | 9.48 S  | 77.33 W | 5-2-4 | NW  | NW | 5974      | 4873 | 4765 |             | 2.86      | B               |
| 612             | URUASHRAJU       | PE0005  | 9.58 S  | 77.32 W | 5-3-0 | SW  | SW | 5650      | 5006 | 4689 | 2.14        | 2.034     | B               |
| 613             | YANAMAREY        | PE0004  | 9.65 S  | 77.27 W | 5-2-0 | SW  | SW | 5150      | 4875 | 4666 | 0.8         | 0.813     | B C             |
| <u>POLAND</u>   |                  |         |         |         |       |     |    |           |      |      |             |           |                 |
| 614             | POD BULA         | PL0111  | 49.19 N | 20.08 E | 7-5-6 | NW  | NW | 1700      |      | 1650 | 0.002       |           | B               |
| 615             | POD CUBRYNA      | PL0180  | 49.19 N | 20.05 E | 7-8-0 | N   | N  | 2190      | 2125 | 2092 | 0.011       | 0.15      | B               |
| <u>SLOVENIA</u> |                  |         |         |         |       |     |    |           |      |      |             |           |                 |
| 616             | TRIGLAVSKI LED.  | SI      | 46.38 N | 13.84 E | 6-7-6 | N   | N  | 2510      | 2460 | 2410 | 0.006       | 0.16      | D F             |
| <u>SPAIN</u>    |                  |         |         |         |       |     |    |           |      |      |             |           |                 |
| 617             | ANETO            | ES9030  | 42.63 N | 0.65 E  | 6-4-8 | NE  | NE | 3300      | 3150 | 2920 | 0.69        | 0.68      | B               |

| NR                 | GLACIER NAME    | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF |   |   |  |
|--------------------|-----------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|---------|---|---|--|
|                    |                 |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           | DATA    |   |   |  |
| 618                | MALADETA        | ES9020  | 42.65 N | 0.64 E  | 6-4-8 | NE  | NE | 3190      | 3090 | 2842 | 0.28        | 0.76      | B       | C | D |  |
| <u>SWEDEN</u>      |                 |         |         |         |       |     |    |           |      |      |             |           |         |   |   |  |
| 619                | ISFALLSGLAC.    | SE0787  | 67.92 N | 18.57 E | 5-3-6 | E   | E  | 1700      |      | 1200 | 1.4         | 2.1       | B       |   |   |  |
| 620                | KARSOJJETNA     | SE0798  | 68.35 N | 18.32 E | 5-3-8 | NE  | E  | 1500      | 1100 | 950  | 1.23        | 1.7       | B       |   |   |  |
| 621                | MARMAGLACI.     | SE0799  | 68.83 N | 18.67 E | 5-2-1 | E   | E  | 1740      |      | 1340 | 3.965       | 3.5       |         | C |   |  |
| 622                | MIKKAJEKNA      | SE0766  | 67.40 N | 17.70 E | 5-1-8 | S   | S  | 1825      |      | 980  | 7.1         | 4.3       | B       |   |   |  |
| 623                | PARTEJEKNA      | SE0763  | 67.17 N | 17.67 E | 5-2-8 | E   | E  | 1800      |      | 1090 | 9.913       | 5.1       | B       |   |   |  |
| 624                | PASSUSJJETNA E. | SE0797  | 68.05 N | 18.43 E | 5-3-8 | NE  | NW | 1630      |      | 1270 | 1.7         | 1.8       | B       |   |   |  |
| 625                | RABOTS GLACI.   | SE0785  | 67.89 N | 18.53 E | 5-2-8 | NW  | W  | 1930      |      | 1080 | 3.946       | 4.1       | B       | C |   |  |
| 626                | RIUKOJJETNA     | SE0790  | 68.08 N | 18.08 E | 3-0-3 | E   | E  | 1456      |      | 1130 | 4.651       | 3         | B       | C |   |  |
| 627                | RUOPSOKJEKNA    | SE0764  | 67.33 N | 17.98 E | 5-3-6 | NE  | N  | 1760      |      | 1150 | 3.5         | 3.7       | B       |   |   |  |
| 628                | RUOTESJEKNA     | SE0767  | 67.42 N | 17.47 E | 5-3-8 | NE  | N  | 1600      |      | 1040 | 5.2         | 4.3       | B       |   |   |  |
| 629                | SALAJEKNA       | SE0759  | 67.12 N | 16.38 E | 5-2-8 | SE  | S  | 1580      |      | 890  | 24.5        | 9.2       | B       |   |   |  |
| 630                | SE KASKASATJ GL | SE0789  | 67.93 N | 18.60 E | 5-3-6 | SE  | S  | 1890      | 1560 | 1440 | 0.6         | 1.4       | B       |   |   |  |
| 631                | STORGLACIAEREN  | SE0788  | 67.90 N | 18.57 E | 5-2-8 | E   | E  | 1720      |      | 1140 | 3.211       | 3.7       | B       | C |   |  |
| 632                | SUOTTASJEKNA    | SE0768  | 67.47 N | 17.58 E | 5-2-8 | NE  | N  | 1800      |      | 1130 | 7.9         | 4.2       | B       |   |   |  |
| 633                | TARFALAGLACI.   | SE0791  | 67.93 N | 18.65 E | 6-7-0 | E   | E  | 1710      |      | 1390 | 1.006       | 1         |         | C |   |  |
| 634                | VARTASJEKNA     | SE0765  | 67.45 N | 17.67 E | 5-3-8 | NE  | NE | 1800      |      | 1300 | 3.6         | 3         | B       |   |   |  |
| <u>SWITZERLAND</u> |                 |         |         |         |       |     |    |           |      |      |             |           |         |   |   |  |
| 635                | ADLER           | CH0016B | 46.01 N | 7.87 E  | 6-2-8 | W   | W  |           |      |      | 2.47        |           |         |   | D |  |
| 636                | ALBIGNA         | CH0116  | 46.30 N | 9.64 E  |       | N   | N  | 3140      |      |      | 8.717       | 6.15      | B       |   |   |  |
| 637                | ALLALIN         | CH0011  | 46.05 N | 7.93 E  | 6-2-6 | N   | E  | 4190      | 3320 | 2601 | 9.68        | 6.5       | B       |   |   |  |
| 638                | ALPETLI(KANDER) | CH0109  | 46.48 N | 7.80 E  | 5-3-6 | NW  | SW | 3270      | 2800 | 2250 | 14.02       | 6.8       | B       |   |   |  |
| 639                | AMMERTEN        | CH0111  | 46.42 N | 7.53 E  | 6-0-7 | NW  | NW | 3240      | 2720 | 2350 | 1.89        | 2.8       | B       |   |   |  |
| 640                | AROLLA (BAS)    | CH0027  | 45.98 N | 7.50 E  | 5-1-9 | N   | N  | 3720      | 3080 | 2135 | 6.3         | 5         | B       |   |   |  |
| 641                | BASODINO        | CH0104  | 46.42 N | 8.48 E  | 6-3-6 | NE  | NE | 3230      | 2880 | 2539 | 2.28        | 1.6       | B       | C |   |  |
| 642                | BIFERTEN        | CH0077  | 46.82 N | 8.95 E  | 5-3-8 | E   | NE | 3610      | 2840 | 1961 | 2.86        | 4.2       | B       |   |   |  |
| 643                | BLUEMILISALP    | CH0064  | 46.50 N | 7.77 E  | 6-1-6 | NW  | NW | 3660      | 2960 | 2250 | 2.98        | 2.9       | B       |   |   |  |
| 644                | BOVEYRE         | CH0041  | 45.97 N | 7.26 E  | 5-2-9 | NW  | NW | 3660      | 3220 | 2620 | 1.99        | 2.5       | B       |   |   |  |
| 645                | BRENEY          | CH0036  | 45.97 N | 7.42 E  | 5-1-7 | S   | SW | 3830      | 3240 | 2575 | 9.8         | 6.3       | B       |   |   |  |
| 646                | BRESCIANA       | CH0103  | 46.50 N | 9.03 E  | 6-3-6 | W   | W  | 3400      | 3080 | 2910 | 0.94        | 1.6       | B       |   |   |  |
| 647                | BRUNEGG         | CH0020  | 46.15 N | 7.70 E  | 5-3-0 | NW  | NW | 4130      | 3160 | 2500 | 6.12        | 4.9       | B       |   |   |  |
| 648                | BRUNNI          | CH0072  | 46.73 N | 8.78 E  | 6-2-4 | E   | N  | 3300      | 2760 | 2560 | 2.99        | 2.9       | B       |   |   |  |
| 649                | CALDERAS        | CH0095  | 46.53 N | 9.71 E  | 6-1-7 | N   | NE | 3360      | 3070 | 2745 | 1.2         | 2         | B       |   |   |  |
| 650                | CAMBRENA        | CH0099  | 46.39 N | 9.99 E  | 6-1-4 | NE  | NE | 3500      | 2960 | 2520 | 1.72        | 2.5       | B       |   |   |  |
| 651                | CAVAGNOLI       | CH0119  | 46.45 N | 8.48 E  | 6-2-8 | NE  | E  | 2880      | 2720 | 2522 | 1.32        | 2.3       | B       |   |   |  |
| 652                | CHEILLON        | CH0029  | 46.00 N | 7.42 E  | 5-1-7 | N   | N  | 3830      | 2960 | 2689 | 4.73        | 4         | B       |   |   |  |
| 653                | CLARIDENFIRN    | CH0141  | 46.85 N | 8.90 E  | 6-0-0 |     |    |           |      |      | 5.127       |           |         |   | F |  |
| 654                | CORBASSIERE     | CH0038  | 45.98 N | 7.30 E  | 5-1-9 | N   | N  | 4310      | 3200 | 2219 | 15.996      | 9.8       | B       |   |   |  |
| 655                | CORNO           | CH0120  | 46.45 N | 8.38 E  | 6-5-6 | N   | N  | 2880      | 2720 | 2570 | 0.27        | 0.7       | B       |   |   |  |
| 656                | CROSLINA        | CH0121  | 46.43 N | 8.73 E  |       | NE  | NE | 3060      | 2860 | 2704 | 0.42        | 0.8       | B       |   |   |  |
| 657                | DUNGEL          | CH0112  | 46.37 N | 7.37 E  | 6-0-0 | NE  | N  | 3200      | 2800 | 2608 | 1.21        | 1.8       | B       |   |   |  |
| 658                | EIGER           | CH0059  | 46.57 N | 7.98 E  | 6-1-6 | W   | NW | 4100      | 3100 | 2202 | 2.27        | 2.6       | B       |   |   |  |
| 659                | EN DARREY       | CH0030  | 46.02 N | 7.38 E  | 6-3-9 | NE  | NE | 3700      | 3120 | 2445 | 1.86        | 2.4       | B       |   |   |  |
| 660                | FEE NORTH       | CH0013  | 46.08 N | 7.88 E  | 6-0-6 | NE  | NE | 4360      | 3260 | 2135 | 16.66       | 5.1       | B       |   | F |  |
| 661                | FERPECLE        | CH0025  | 46.02 N | 7.58 E  | 5-3-8 | NW  | N  | 3680      | 3300 | 2095 | 9.79        | 6         | B       |   |   |  |
| 662                | FIESCHER        | CH0004  | 46.50 N | 8.15 E  | 5-1-9 | SE  | S  | 4180      | 3140 | 1681 | 33.06       | 16        | B       |   |   |  |
| 663                | FINDELEN        | CH0016  | 46.00 N | 7.87 E  | 5-1-6 | NW  | W  | 3911      | 3284 | 2550 | 13.1        | 7.4       | B       | C | D |  |
| 664                | FIRNALPELI      | CH0075  | 46.78 N | 8.47 E  | 6-0-6 | NW  | N  | 2920      | 2680 | 2172 | 1.18        | 1.1       | B       |   |   |  |
| 665                | FORNO           | CH0102  | 46.30 N | 9.70 E  | 5-1-9 | N   | N  | 3360      | 2740 | 2232 | 8.77        | 6.8       | B       |   |   |  |
| 666                | GAMCHI          | CH0061  | 46.51 N | 7.79 E  | 6-1-9 | N   | N  | 2840      | 2260 | 1950 | 1.73        | 2.7       | B       |   |   |  |
| 667                | GAULI           | CH0052  | 46.62 N | 8.18 E  | 5-1-6 | E   | E  | 3630      | 2880 | 2110 | 13.7        | 6.8       | B       |   |   |  |
| 668                | GELTEN          | CH0113  | 46.35 N | 7.33 E  | 6-0-0 | N   | N  | 3060      | 2700 | 2440 | 1.17        | 0.8       | B       |   |   |  |
| 669                | GIETRO          | CH0037  | 46.00 N | 7.38 E  | 6-3-4 | NW  | W  | 3830      | 3240 | 2597 | 5.549       | 5.4       | B       |   |   |  |
| 670                | GLAERNISCH      | CH0080  | 47.00 N | 8.98 E  | 6-2-6 | W   | W  | 2910      | 2600 | 2330 | 2.09        | 2.3       | B       |   |   |  |
| 671                | GORNER          | CH0014  | 45.97 N | 7.80 E  | 5-1-9 | N   | NW | 4610      | 3220 | 2240 | 38.247      | 14.1      | B       |   |   |  |
| 672                | GRAND DESERT    | CH0031  | 46.07 N | 7.34 E  | 6-3-6 | NW  | N  | 3340      | 2960 | 2760 | 1.85        | 2.3       | B       |   |   |  |
| 673                | GR. PLAN NEVE   | CH0045  | 46.25 N | 7.15 E  | 6-4-7 | N   | N  | 2560      | 2460 | 2350 | 0.2         | 0.4       | B       |   |   |  |
| 674                | GRIES           | CH0003  | 46.44 N | 8.34 E  | 5-3-4 | NE  | NE | 3307      | 2920 | 2415 | 4.973       | 6.2       | B       | C | D |  |

| NR  | GLACIER NAME      | PSFG NR | LAT     | LON     | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|-----|-------------------|---------|---------|---------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|     |                   |         |         |         |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 675 | GRIESS(KLAUSEN)   | CH0074  | 46.83 N | 8.83 E  | 6-1-7 | N   | NW | 3080      | 2420 | 2223 | 2.48        | 1.3       | F               |
| 676 | GRIESSEN(OBWA.)   | CH0076  | 46.85 N | 8.50 E  | 6-2-6 | W   | NW | 2890      | 2600 | 2515 | 1.27        | 1.3       |                 |
| 677 | GR. ALETSCHE      | CH0005  | 46.50 N | 8.03 E  | 5-1-9 | SE  | S  | 4160      | 3140 | 1565 | 83.015      | 24.7      |                 |
| 678 | HOHLAUB           | CH      | 46.06 N | 7.92 E  |       |     |    |           |      |      | 2.256       |           |                 |
| 679 | HUEFI             | CH0073  | 46.82 N | 8.85 E  | 5-1-8 | S   | SW | 3240      | 2780 | 1700 | 13.73       | 7         |                 |
| 680 | KALTWASSER        | CH0007  | 46.25 N | 8.08 E  | 6-0-6 | NW  | W  | 3370      | 2940 | 2660 | 1.85        | 1.6       |                 |
| 681 | KEHLEN            | CH0068  | 46.68 N | 8.42 E  | 5-1-8 | SE  | SE | 3418      | 2800 | 2200 | 3.15        | 3.3       |                 |
| 682 | KESSJEN           | CH0012  | 46.07 N | 7.93 E  | 6-5-6 | NE  | NE | 3240      | 2980 | 2868 | 0.195       | 0.9       |                 |
| 683 | LAEMMERN          | CH0063  | 46.40 N | 7.55 E  | 6-1-6 | E   | E  | 3240      | 2900 | 2540 | 3.35        | 2.5       |                 |
| 684 | LANG              | CH0018  | 46.46 N | 7.93 E  | 5-1-9 | SW  | SW | 3900      | 2960 | 2077 | 10.03       | 7.7       |                 |
| 685 | LAVAZ             | CH0082  | 46.63 N | 8.93 E  | 6-1-8 | NE  | N  | 3020      | 2580 | 2428 | 1.76        | 2.6       | B               |
| 686 | LENTA             | CH0084  | 46.51 N | 9.04 E  | 5-2-7 | N   | N  | 3400      | 2820 | 2360 | 1.4         | 2.6       |                 |
| 687 | LIMMERN           | CH0078  | 46.82 N | 8.98 E  | 6-2-7 | NE  | NE | 3420      | 2760 | 2290 | 2.52        | 2.9       |                 |
| 688 | LISCHANA          | CH0098  | 46.77 N | 10.35 E | 6-5-9 | NW  | NW | 3030      | 2880 | 2800 | 0.21        | 0.6       |                 |
| 689 | MOIRY             | CH0024  | 46.08 N | 7.60 E  | 5-1-8 | N   | N  | 3850      | 3120 | 2410 | 6.11        | 5.6       |                 |
| 690 | MOMING            | CH0023  | 46.08 N | 7.67 E  | 6-0-9 | N   | NW | 4070      | 3160 | 2580 | 5.77        | 3.8       |                 |
| 691 | MONT DURAND       | CH0035  | 45.92 N | 7.33 E  | 5-1-9 | E   | NE | 4280      | 3060 | 2340 | 7.59        | 6         |                 |
| 692 | MONT FORT         | CH0032  | 46.08 N | 7.32 E  | 6-3-6 | NW  | N  | 3330      | 2900 | 2780 | 1.1         | 2         |                 |
| 693 | MONT MINE         | CH0026  | 46.02 N | 7.55 E  | 5-1-9 | NW  | N  | 3720      | 3220 | 1963 | 10.89       | 8.1       |                 |
| 694 | MORTERATSCH       | CH0094  | 46.40 N | 9.93 E  | 5-1-9 | N   | N  | 4020      | 3000 | 2085 | 17.15       | 7         | B               |
| 695 | MUTT              | CH0002  | 46.55 N | 8.42 E  | 6-5-6 | NW  | NW | 3000      | 2780 | 2623 | 0.57        | 1.1       |                 |
| 696 | OB.GRINDELWALD    | CH0057  | 46.62 N | 8.10 E  | 5-1-8 | NW  | NW | 3740      | 3000 | 1250 | 10.07       | 5.5       |                 |
| 697 | OBERALETSCHE      | CH0006  | 46.42 N | 7.97 E  | 5-1-9 | SE  | SE | 3890      | 2920 | 2144 | 21.71       | 9.1       |                 |
| 698 | OTEMMA            | CH0034  | 45.95 N | 7.45 E  | 5-1-7 | SW  | SW | 3800      | 3020 | 2460 | 16.55       | 8.5       |                 |
| 699 | PALUE             | CH0100  | 46.37 N | 9.98 E  | 6-2-9 | E   | E  | 3870      | 3180 | 2640 | 6.62        | 4         |                 |
| 700 | PANEYROSSE        | CH0044  | 46.27 N | 7.17 E  | 6-4-6 | N   | N  | 2760      | 2560 | 2380 | 0.45        | 0.7       |                 |
| 701 | PARADIES          | CH0086  | 46.50 N | 9.07 E  | 6-0-6 | N   | NE | 3400      | 2880 | 2688 | 4.6         | 3.6       |                 |
| 702 | PARADISINO        | CH0101  | 46.42 N | 10.11 E | 6-3-9 | NW  | W  | 3250      | 2980 | 2830 | 0.55        | 1         |                 |
| 703 | PIZOL             | CH0081  | 46.97 N | 9.40 E  | 6-5-6 | N   | N  | 2786      | 2682 | 2611 | 0.081       | 0.4       | B C             |
| 704 | PLATTALVA         | CH0114  | 46.83 N | 8.98 E  | 6-5-6 | E   | E  | 2980      | 2740 | 2580 | 0.73        | 1.1       |                 |
| 705 | PORCHABELLA       | CH0088  | 46.63 N | 9.88 E  | 6-1-6 | N   | N  | 3390      | 2880 | 2645 | 2.59        | 2.5       |                 |
| 706 | PRAPIO            | CH0048  | 46.32 N | 7.20 E  | 6-5-7 | NW  | NW | 3020      | 2780 | 2525 | 0.36        | 0.9       |                 |
| 707 | PUNTEGLIAS        | CH0083  | 46.79 N | 8.95 E  | 6-1-7 | SE  | S  | 3010      | 2520 | 2350 | 0.93        | 2         |                 |
| 708 | RAETZLI (PL.MOR.) | CH0065  | 46.38 N | 7.52 E  | 6-2-6 | N   | NW | 2970      | 2760 | 2450 | 9.8         | 4         |                 |
| 709 | RHONE             | CH0001  | 46.62 N | 8.40 E  | 5-1-4 | S   | S  | 3620      | 2940 | 2208 | 17.38       | 10.2      |                 |
| 710 | RIED              | CH0017  | 46.13 N | 7.85 E  | 5-3-9 | NW  | NW | 4280      | 3460 | 2069 | 8.26        | 6.3       |                 |
| 711 | ROSEG             | CH0092  | 46.38 N | 9.84 E  | 5-1-7 | N   | N  | 3650      | 3060 | 2160 | 8.72        | 5.2       |                 |
| 712 | ROSENLAUI         | CH0056  | 46.65 N | 8.15 E  | 5-2-6 | NE  | N  | 3700      | 3000 | 1860 | 6.2         | 5.2       | B               |
| 713 | ROTFIRN NORD      | CH0069  | 46.66 N | 8.42 E  | 6-1-9 | E   | NE | 3525      | 2680 | 2035 | 1.21        | 2.3       |                 |
| 714 | SALEINA           | CH0042  | 45.98 N | 7.07 E  | 5-1-8 | E   | NE | 3900      | 2940 | 1788 | 5.03        | 6.4       |                 |
| 715 | SANKT ANNA        | CH0067  | 46.60 N | 8.60 E  | 6-3-6 | N   | N  | 2905      | 2720 | 2580 | 0.44        | 0.9       |                 |
| 716 | SARDONA           | CH0091  | 46.92 N | 9.27 E  | 6-4-6 | E   | E  | 2790      | 2580 | 2450 | 0.38        | 0.7       |                 |
| 717 | SCALETTA          | CH0115  | 46.70 N | 9.95 E  | 6-5-0 | N   | N  | 3100      | 2780 | 2580 | 0.66        | 1.1       |                 |
| 718 | SCHWARZBERG       | CH0010  | 46.02 N | 7.93 E  | 6-2-6 | NE  | NE | 3650      | 3080 | 2660 | 5.332       | 4.3       |                 |
| 719 | SEEWJINEN         | CH      | 46.00 N | 7.95 E  |       |     |    |           |      |      | 1.538       |           |                 |
| 720 | SESVENNA          | CH0097  | 46.71 N | 10.41 E | 6-5-6 | NE  | N  | 3150      | 2940 | 2735 | 0.67        | 1.2       |                 |
| 721 | SEX ROUGE         | CH0047  | 46.33 N | 7.21 E  | 6-5-6 | N   | NW | 2890      | 2820 | 2650 | 0.72        | 1.2       | B C D F         |
| 722 | SILVRETTA         | CH0090  | 46.85 N | 10.08 E | 6-2-6 | NW  | W  | 3079      | 2780 | 2467 | 2.785       | 3.5       |                 |
| 723 | STEIN             | CH0053  | 46.70 N | 8.43 E  | 5-2-8 | N   | N  | 3490      | 2880 | 1945 | 6.52        | 4.7       |                 |
| 724 | STEINLIMMI        | CH0054  | 46.70 N | 8.40 E  | 5-1-7 | N   | N  | 3300      | 2640 | 2100 | 2.21        | 2.7       |                 |
| 725 | SULZ              | CH0079  | 46.88 N | 9.05 E  | 6-5-8 | N   | N  | 2480      | 2000 | 1789 | 0.2         | 0.5       |                 |
| 726 | SURETTA           | CH0087  | 46.52 N | 9.38 E  | 6-1-7 | NE  | NE | 3010      | 2720 | 2227 | 1.17        | 1.6       |                 |
| 727 | TIATSCHA          | CH0096  | 46.83 N | 10.09 E | 6-3-4 | S   | S  | 3130      | 2900 | 2650 | 2.11        | 2.2       |                 |
| 728 | TIEFEN            | CH0066  | 46.62 N | 8.43 E  | 5-1-9 | SE  | SE | 3530      | 2960 | 2520 | 3.17        | 3.4       |                 |
| 729 | TRIENT            | CH0043  | 46.00 N | 7.03 E  | 5-3-8 | N   | N  | 3490      | 3140 | 2030 | 6.58        | 5         |                 |
| 730 | TRIFT (GADMEN)    | CH0055  | 46.67 N | 8.37 E  | 5-1-8 | N   | N  | 3505      | 2900 | 1652 | 15.335      | 7.1       | B C             |
| 731 | TSANFLEURON       | CH0033  | 46.32 N | 7.23 E  | 6-0-6 | NE  | E  | 2945      | 2768 | 2497 | 2.752       | 3         |                 |
| 732 | TSCHIERVA         | CH0093  | 46.40 N | 9.88 E  | 5-1-8 | NW  | NW | 4000      | 3060 | 2340 | 6.83        | 5         |                 |
| 733 | TSCHINGEL         | CH0060  | 46.50 N | 7.85 E  | 6-2-7 | N   | E  | 3510      | 2680 | 2269 | 6.18        | 3.8       |                 |
| 734 | TSEUDET           | CH0040  | 45.90 N | 7.25 E  | 6-1-7 | N   | N  | 3730      | 2900 | 2464 | 1.73        | 3         |                 |
| 735 | TSIDJIORE NOUVE   | CH0028  | 46.00 N | 7.45 E  | 5-2-8 | N   | NE | 3800      | 3260 | 2205 | 3.12        | 5         | B               |

| NR            | GLACIER NAME     | PSFG NR | LAT     | LON      | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF<br>DATA |
|---------------|------------------|---------|---------|----------|-------|-----|----|-----------|------|------|-------------|-----------|-----------------|
|               |                  |         |         |          |       | AC  | AB | MAX       | MED  | MIN  |             |           |                 |
| 736           | UNT. GRINDELW.   | CH0058  | 46.58 N | 8.09 E   | 5-1-9 | N   | N  | 4100      | 2780 | 1090 | 20.6        | 9 B       | F               |
| 737           | UNTERAAR         | CH0051  | 46.57 N | 8.22 E   | 5-1-7 | E   | E  | 4090      | 2660 | 1930 | 22.727      | 13.5 B    |                 |
| 738           | VAL TORTA        | CH0118  | 46.47 N | 8.53 E   | 6-4-9 | N   | N  | 2740      | 2580 | 2512 | 0.17        | 0.6 B     |                 |
| 739           | VALLEGGIA        | CH0117  | 46.47 N | 8.51 E   | 6-4-8 | NE  | NE | 2820      | 2560 | 2426 | 0.59        | 1.2 B     |                 |
| 740           | VALSOREY         | CH0039  | 45.90 N | 7.27 E   | 5-1-8 | NE  | NW | 3730      | 3100 | 2399 | 2.34        | 4.1 B     |                 |
| 741           | VERSTANKLA       | CH0089  | 46.84 N | 10.07 E  | 6-1-7 | NW  | NW | 3100      | 2680 | 2405 | 1.06        | 2 B       |                 |
| 742           | VORAB            | CH0085  | 46.88 N | 9.17 E   | 6-0-6 | E   | SE | 2980      | 2720 | 2560 | 2.51        | 2 B       |                 |
| 743           | WALLENBUR        | CH0071  | 46.71 N | 8.47 E   | 6-1-9 | E   | SE | 3280      | 2580 | 2250 | 1.7         | 2.2 B     |                 |
| 744           | ZINAL            | CH0022  | 46.07 N | 7.63 E   | 5-1-9 | N   | N  | 4260      | 3060 | 2040 | 16.24       | 8 B       |                 |
| <u>TURKEY</u> |                  |         |         |          |       |     |    |           |      |      |             |           |                 |
| 745           | ERCIYES          | TR      | 38.53 N | 35.45 E  |       |     |    | 3650      |      | 3300 | 0.05        | 0.55 B    |                 |
| <u>U.S.A.</u> |                  |         |         |          |       |     |    |           |      |      |             |           |                 |
| 746           | BAGLEY ICE FIELD | US      | 60.50 N | 142.50 W |       |     |    |           |      |      |             |           | F               |
| 747           | BARNARD          | US0615  | 61.17 N | 147.92 W | 6-4-8 | S   | SE | 1890      |      | 550  |             | 4         | D               |
| 748           | BEAR             | US      | 59.93 N | 149.53 W |       |     |    |           |      |      | 217.9       | B         |                 |
| 749           | BERING           | US      | 60.40 N | 143.00 W | 2-1-2 | W   | S  | 3230      |      | 200  |             |           | D               |
| 750           | BOULDER          | US2005  | 48.77 N | 120.88 W | 5-3-8 | SE  | E  | 3230      | 2230 | 1550 |             | 3.58 B    |                 |
| 751           | COLEMAN          | US2011  | 48.80 N | 120.82 W | 6-3-8 | NW  | NW | 3260      |      | 1230 |             | 4.5 B     |                 |
| 752           | COLUMBIA (2057)  | US2057  | 47.97 N | 121.35 W | 6-4-8 | S   | S  | 1750      | 1600 | 1450 | 0.9         | 1.53 B    | C               |
| 753           | COLUMBIA (627)   | US0627  | 61.00 N | 147.10 W | 5-1-4 | SE  | S  | 3000      | 800  | 0    | 1075        | 61 B      |                 |
| 754           | DANIELS          | US2052  | 47.57 N | 121.17 W | 6-3-6 | NE  | NE | 2300      | 2200 | 1980 | 0.4         | 0.55 B    | C               |
| 755           | DEMING           | US2009  | 48.75 N | 120.82 W | --0   | SW  | SW | 3230      | 2250 | 1340 |             | 5.17 B    |                 |
| 756           | DINGLESTADT      | US      | 59.70 N | 150.42 W |       |     |    |           |      |      | 67.2        | B         |                 |
| 757           | EASTON           | US2008  | 48.75 N | 120.83 W | 5-3-8 | SW  | S  | 2900      | 2200 | 1700 | 2.9         | 3.97 B    | C               |
| 758           | EMMONS           | US2022  | 46.85 N | 121.72 W | 5-3-9 | NE  | NE | 4320      |      | 1485 | 11.17       | 2.8       | C               |
| 759           | EXCELSIOR        | US      | 60.00 N | 148.77 W |       |     |    | 1622      |      | 242  | 129.59      | 25.331 B  |                 |
| 760           | EXIT             | US0390  | 60.18 N | 149.65 W | 4-2-8 | E   | E  | 1000      | 600  | 157  | 39.5        | 3 B       |                 |
| 761           | FOSS             | US2053  | 47.55 N | 121.20 W | 6-3-8 | NE  | NE | 2125      | 2000 | 1840 | 0.4         | 0.54 B    | C               |
| 762           | GREWINGK         | US      | 59.58 N | 150.98 W |       |     |    | 1590      |      | 76   | 71.73       | 19.36 B   |                 |
| 763           | GULKANA          | US0200  | 63.25 N | 145.42 W | 5-2-9 | S   | SW | 2460      | 1840 | 1165 | 15.11       | 8.5       | C               |
| 764           | GUYOT N BRANCH   | US      | 60.20 N | 141.40 W |       |     |    |           |      |      |             |           | D               |
| 765           | GUYOT S BRANCH   | US      | 60.17 N | 141.60 W |       |     |    |           |      |      |             |           | D               |
| 766           | HIDDEN           | US      | 59.72 N | 139.10 W |       |     |    |           |      |      |             |           | D               |
| 767           | HUBBARD          | US1290  | 60.08 N | 139.33 W | 5-1-4 | SE  | SE | 5800      | 1500 | 0    |             | 122       | D F             |
| 768           | ICE WORM         | US2054  | 47.55 N | 121.17 W | 6-4-8 | E   | E  | 2100      | 2010 | 1900 | 0.1         | 0.46 B    | C               |
| 769           | KLUTLAN          | US      | 62.01 N | 142.34 W |       |     |    |           |      |      |             |           | D               |
| 770           | LEMON CREEK      | US      | 58.38 N | 134.36 W |       | N   | NW | 1400      | 1100 | 820  | 14          | 5.94      | C               |
| 771           | LOGAN            | US      | 60.85 N | 141.00 W |       |     |    |           |      |      |             |           | D               |
| 772           | LOWER CURTIS     | US2055  | 48.83 N | 121.62 W | 6-4-8 | W   | W  | 1850      | 1625 | 1470 | 0.8         | 0.74 B    | C               |
| 773           | LYMAN            | US      | 48.17 N | 120.89 W | 6-4-4 | N   | N  | 2040      | 1950 | 1830 |             | 0.51 B    |                 |
| 774           | LYNCH            | US2056  | 47.57 N | 121.18 W | 6-5-4 | N   | N  | 2300      | 2185 | 1950 | 0.7         | 1.02 B    | C               |
| 775           | MALASPINA        | US      | 59.71 N | 140.63 W |       | S   | S  |           |      |      |             |           | D F             |
| 776           | MCCARTY          | US      | 59.78 N | 150.22 W |       |     |    |           |      |      |             | B         |                 |
| 777           | NISQUALLY        | US2027  | 46.82 N | 121.74 W | 5-2-9 | S   | S  | 4380      |      | 1455 | 4.6         | 2.9       | C               |
| 778           | NOISY CREEK      | US2078  | 48.67 N | 121.53 W | 6-4-8 | N   | N  | 1920      | 1791 | 1666 | 0.53        | 1.14      | C               |
| 779           | NORTH KLAWATTI   | US2076  | 48.57 N | 121.12 W | 5-5-  | SE  | SE | 2409      | 1729 | 1726 | 1.46        | 2.77      | C               |
| 780           | NORTHWESTERN     | US      | 59.87 N | 150.05 W |       |     |    | 1923      |      | 0    | 161.54      | 29.651 B  |                 |
| 781           | NOVATAK          | US      | 59.44 N | 138.44 W |       |     |    |           |      |      |             |           | D               |
| 782           | NUKA             | US      | 59.66 N | 150.73 W |       |     |    | 1608      |      | 400  | 14.36       | 7.624 B   |                 |
| 783           | OKPILAK          | US      | 69.15 N | 144.18 W |       |     |    | 2400      |      | 1430 | 9.12        | 8.765 B   |                 |
| 784           | RAINBOW          | US2003  | 48.80 N | 121.77 W | 6-3-8 | E   | E  | 2040      | 1750 | 1340 | 1.6         | 1.92 B    | C               |
| 785           | RED              | US      | 60.02 N | 153.02 W |       | SE  | SE | 3050      |      | 350  |             |           | F               |
| 786           | ROOSEVELT        | US2012  | 48.80 N | 120.82 W | 6-3-8 | N   | NW | 3260      |      | 1400 |             | 4 B       |                 |
| 787           | SANDALEE         | US2079  | 48.42 N | 120.80 W | 6-4-5 | N   | N  | 2280      | 2154 | 1975 | 0.2         | 0.79      | C               |
| 788           | SHOLES           | US      | 48.80 N | 121.78 W |       | NE  | NE | 1960      | 1820 | 1690 |             | 0.94 B    | C               |
| 789           | SILVER           | US2077  | 48.98 N | 121.25 W | 6-4-8 | N   | NE | 2700      | 2405 | 2100 | 0.48        | 0.925     | C               |
| 790           | SOUTH CASCADE    | US2013  | 48.37 N | 121.05 W | 5-3-8 | N   | N  | 2150      | 1920 | 1634 | 1.72        | 2 B       | C               |
| 791           | SQUAK            | US2007  | 48.75 N | 120.87 W | 5-3-8 | N   | SE | 2940      | 2250 | 1750 |             | 2.9 B     |                 |
| 792           | STELLER          | US      | 60.36 N | 143.65 W |       |     |    |           |      |      |             |           | D               |

| NR  | GLACIER NAME | PSFG NR | LAT     | LON      | CODE  | EXP |    | ELEVATION |      |      | AREA<br>KM² | LEN<br>KM | TYPE OF |   |   |
|-----|--------------|---------|---------|----------|-------|-----|----|-----------|------|------|-------------|-----------|---------|---|---|
|     |              |         |         |          |       | AC  | AB | MAX       | MED  | MIN  |             |           | DATA    |   |   |
| 793 | TAKU         | US1805  | 58.55 N | 134.13 W | 4-2-2 | SE  | S  | 2000      | 1200 | 0    | 756.905     | 58.1      | B       | C | F |
| 794 | TANA         | US      | 60.75 N | 142.77 W |       |     |    |           |      |      |             |           |         | D |   |
| 795 | TEBENKOF     | US0414A | 60.72 N | 148.48 W | 5-3-8 | NE  | NE |           |      | 15   | 28          | 13        | B       |   |   |
| 796 | VALDEZ       | US0629  | 61.25 N | 146.17 W | 5-2-7 | E   | S  | 2300      |      | 104  | 164         | 34        | B       |   |   |
| 797 | WALSH        | US      | 60.87 N | 140.15 W |       |     |    |           |      |      |             |           |         | D |   |
| 798 | WEST NUNATAK | US      | 59.74 N | 138.88 W |       |     |    |           |      |      |             |           |         | D |   |
| 799 | WOLVERINE    | US0411  | 60.40 N | 148.92 W | 5-3-8 | S   | S  | 1700      | 1310 | 400  | 16.67       | 8         | B       | C |   |
| 800 | YAHTSE       | US      | 60.31 N | 141.71 W |       |     |    |           |      |      |             |           |         | D |   |
| 801 | YAKUTAT      | US1303  | 59.48 N | 137.75 W | 5-1-4 |     |    | 1520      | 610  | 0    |             | 27.3      |         | D |   |
| 802 | YALIK        | US      | 59.48 N | 150.73 W |       |     |    | 1570      |      | 43   | 50.05       | 15.143    | B       |   |   |
| 803 | YAWNING      | US2050  | 48.45 N | 121.03 W | 6-5-8 | NE  | NE | 2100      | 1970 | 1880 | 0.3         | 0.65      | B       | C |   |



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| <p>WORLD GLACIER MONITORING SERVICE</p> <p><b>VARIATIONS IN THE POSITION</b></p> <p><b>OF GLACIER FRONTS 2005–2010</b></p> |
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TABLE B

|                        |   |
|------------------------|---|
| NR                     | Record number   |
| GLACIER NAME           | 15 alphabetic or numeric digits   |
| PSFG NUMBER            | 5 digits identifying glacier with alphabetic prefix<br>denoting country   |
| METHOD                 | A = aerial photogrammetry<br>B = terrestrial photogrammetry<br>C = geodetic ground survey<br>(theodolite, tape etc.)<br>D = combination of A, B or C<br>E = other methods<br>_ = no information |
| 1ST SURVEY             | Year when first front variation data is available (at WGMS)   |
| LAST SURVEY            | Last survey before reported period  |
| VARIATION IN<br>METERS | Variation in the position of the glacier front in horizontal<br>projection expressed as the change in length between<br>the surveys   |
| Key to Symbols         | +X: Glacier in advance<br>-X : Glacier in retreat<br>ST : Glacier stationary<br>SN : Glacier front covered by snow  |

| NR                | GLACIER NAME         | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|-------------------|----------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|                   |                      |         |       |      |        | SURVEY               | 2006 | 2007 | 2008 | 2009 |
| <u>ANTARCTICA</u> |                      |         |       |      |        |                      |      |      |      |      |
| 1                 | BAHIA DEL DIABLO     | AQ      | 2000  | 2005 | E      | ST                   | ST   | ST   | ST   | ST   |
| <u>ARGENTINA</u>  |                      |         |       |      |        |                      |      |      |      |      |
| 2                 | AZUFRE               | AR      | 1963  | 2005 | E      |                      | 0    |      |      |      |
| 3                 | BARROSO              | AR      | 1963  | 2005 | E      |                      | -68  |      |      |      |
| 4                 | CAMISA               | AR      | 1963  | 2005 | E      |                      | -29  |      |      |      |
| 5                 | CANON HISPANO        | AR      | 1963  | 2005 | E      |                      | -103 |      |      |      |
| 6                 | GUSSFELDT            | AR      | 1929  | 2005 | E      |                      | -20  |      |      |      |
| 7                 | HORCONES INFERIOR    | AR5006  | 1976  | 2005 | E      | 440                  |      |      |      |      |
| 8                 | HUMO                 | AR      | 1860  | 2000 | D      |                      | -150 |      |      |      |
| 9                 | PENON                | AR      | 1720  | 2005 | E      |                      | 95   |      |      |      |
| 10                | SALINILLAS           | AR      | 1963  | 2005 | E      |                      | -527 |      |      |      |
| 11                | SAN JOSE             | AR      | 1963  | 2005 | E      |                      | -57  |      |      |      |
| 12                | TUPUNGATO 01         | AR      | 1975  | 2005 | E      |                      | -10  |      |      |      |
| 13                | TUPUNGATO 02         | AR      | 1975  | 2005 | E      |                      | 0    |      |      |      |
| 14                | TUPUNGATO 03         | AR      | 1975  | 2005 | E      |                      | 0    |      |      |      |
| 15                | TUPUNGATO 04         | AR      | 1975  | 2005 | E      |                      | 0    |      |      |      |
| 16                | VACAS                | AR      | 1929  | 2005 | E      |                      | -400 |      |      |      |
| <u>AUSTRIA</u>    |                      |         |       |      |        |                      |      |      |      |      |
| 17                | ALPEINER F.          | AT0307  | 1848  | 2004 | E      | -X                   | -108 | -34  | -17  | -7   |
| 18                | BACHFALLEN F.        | AT0304  | 1892  | 2005 | C      | -10                  | -17  | -10  | -16  | -9   |
| 19                | BAERENKOPF K.        | AT0702  | 1915  | 2005 | C      | -10                  | -8   | -5   |      |      |
| 20                | BERGLAS F.           | AT0308  | 1892  | 2005 | C      | -12                  | -15  | -10  | -12  | -16  |
| 21                | BIELTAL F.           | AT0105A | 1924  | 2005 | -      | -8                   |      |      |      |      |
| 22                | BIELTAL F. W         | AT0105B | 1970  | 2005 | C      | -14                  | -10  |      |      |      |
| 23                | BIELTALFERNER MITTE  | AT      | 1997  | 2005 | C      | -8                   | -6   | -42  | -6   | -5   |
| 24                | BRENNKOGL K.         | AT0727  | 1988  | 2005 | C      | -12                  | -8   | -7   | -2   | -6   |
| 25                | DAUNKOGEL F.         | AT0310A | 1891  | 2005 | C      | -13                  | -28  | -11  | -20  | -5   |
| 26                | DIEM F.              | AT0220  | 1848  | 2005 | C      | -38                  | -44  | -15  | -36  | -18  |
| 27                | EISKAR G.            | AT1301  | 1920  | 2005 | C      | -2                   | -3   | 0    | SN   | 0    |
| 28                | FERNAU F.            | AT0312  | 1891  | 2004 | C      | -17                  | -6   | -1   | -5   | -2   |
| 29                | FREIGER F.           | AT0320  | 1899  | 2005 | C      | 2                    |      | -3   | -3   | -1   |
| 30                | FREIWAND K.          | AT0706  | 1929  | 2005 | C      | -10                  | -8   | -2   | -9   | -4   |
| 31                | FROSCHNITZ K.        | AT0507  | 1860  | 2005 | C      | -28                  | -23  | -12  | -20  | -8   |
| 32                | FURTSCHAGL K.        | AT0406  | 1897  | 2005 | E      | -X                   |      |      |      |      |
| 33                | GAISKAR F.           | AT0325  | 1984  | 2005 | C      | -24                  | -11  | -8   | -10  | -9   |
| 34                | GAISSBERG F.         | AT0225  | 1856  | 2005 | C      | -70                  | -21  | -20  | -14  | -14  |
| 35                | GEPATSCH F.          | AT0202  | 1803  | 2005 | C      | -28                  | -40  | -33  | -32  | -40  |
| 36                | GOESSNITZ K.         | AT1201  | 1983  | 2005 | C      | -3                   | -4   | -3   | -2   | -5   |
| 37                | GOLDBERG K.          | AT0802B | 1850  | 2005 | C      | -7                   | -10  | -4   | -5   | -13  |
| 38                | GR. GOSAU G.         | AT1101  | 1884  | 2005 | C      | -17                  | -12  | 1    | -9   | -10  |
| 39                | GROSSELEND K.        | AT1001  | 1900  | 2004 | C      | -7                   | -15  | 1    | -5   | -11  |
| 40                | GRUENAU F.           | AT0315  | 1892  | 2005 | C      | -21                  | -16  | -1   | -1   |      |
| 41                | GURGLER F.           | AT0222  | 1896  | 2005 | C      | -41                  | -33  | -17  | -13  | -3   |
| 42                | GUSLAR F.            | AT0210  | 1893  | 2005 | C      | -24                  | -37  | -25  | -27  | -30  |
| 43                | HALLSTAETTER G.      | AT1102  | 1848  | 2005 | C      | -22                  | -14  | -5   | -6   | -5   |
| 44                | HINTEREIS FERNER     | AT0209  | 1847  | 2005 | C      | -30                  | -39  | -38  | -36  | -37  |
| 45                | HOCHALM K.           | AT1005  | 1900  | 2005 | C      | -7                   | -12  | 0    | -9   | -8   |
| 46                | HOCHJOCH F.          | AT0208  | 1856  | 2005 | C      | -23                  | -25  | -30  | -29  | -27  |
| 47                | HORN K.(SCHOB.)      | AT1202  | 1984  | 2005 | C      | -24                  | -9   | -18  | -10  | -6   |
| 48                | HORN K.(ZILLER)      | AT0402  | 1882  | 2005 | C      | -84                  | -33  | -10  | -8   | -5   |
| 49                | INN.PIRCHLKAR        | AT0228  | 1982  | 2005 | C      | -10                  | -4   | -13  | -2   | -9   |
| 50                | JAMTAL F.            | AT0106  | 1892  | 2005 | C      | -14                  | -14  | -11  | -9   | -19  |
| 51                | KALBERSPITZ K.       | AT1003  | 1927  | 2005 | C      | -13                  | -8   | -6   | -7   | -6   |
| 52                | KALSER BAERENKOPF K. | AT      | 1971  | 2005 | C      | 0                    |      | 0    | -1   | 0    |
| 53                | KARLINGER K.         | AT0701  | 1860  | 2005 | E      | -X                   |      | SN   |      |      |
| 54                | KESSELWAND FERNER    | AT0226  | 1900  | 2005 | C      | -18                  | -30  | -29  | -44  | -35  |
| 55                | KLEINEISER K.        | AT0717  | 1963  | 2005 | C      | -7                   |      | -1   | 0    |      |
| 56                | KLEINELEND K.        | AT1002  | 1900  | 2005 | C      | -8                   | -8   | 4    | 0    | -9   |

| NR  | GLACIER NAME         | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|-----|----------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|     |                      |         |       |      |        | 2006                 | 2007 | 2008 | 2009 | 2010 |
| 57  | KLEINFLEISS K.       | AT0801  | 1851  | 2005 | C      | -1                   | -8   | 5    | 5    | -3   |
| 58  | KLOSTERTALER M       | AT0102B | 1969  | 2005 | C      | -8                   | -27  | 2    | -6   | -16  |
| 59  | KLOSTERTALER N       | AT0102A | 1969  | 2005 | E      | -X                   |      |      |      |      |
| 60  | KRIMMLER K.          | AT0501A | 1897  | 2005 | C      | -9                   |      | -2   | -18  | -8   |
| 61  | KRIMMLER K. EAST     | AT0501B | 1897  | 2005 | —      | -9                   |      |      |      |      |
| 62  | LAENGENTALER F.      | AT0305  | 1905  | 2004 | C      | -14                  | -31  |      |      |      |
| 63  | LANDECK K.           | AT0604  | 1978  | 2005 | C      | -7                   |      | -5   | 0    | -5   |
| 64  | LANGTALER F.         | AT0223  | 1846  | 2005 | C      | -17                  | -31  | -16  | -23  | -22  |
| 65  | LITZNERGL.           | AT0101  | 1933  | 2005 | C      | -10                  | -9   | -8   | -17  | -12  |
| 66  | MARZELL F.           | AT0218  | 1856  | 2005 | C      | -20                  |      | -39  | -42  |      |
| 67  | MAURER K.(GLO.)      | AT0714  | 1896  | 2005 | C      | -1                   |      | -3   | -3   | -3   |
| 68  | MAURER K.(VEN.)      | AT0510  | 1897  | 2003 | E      | -X                   |      |      |      |      |
| 69  | MITTERKAR F.         | AT0214  | 1892  | 2005 | C      | -4                   | -37  | -4   | -7   | -9   |
| 70  | MUTMAL F.            | AT0227  | 1969  | 2005 | C      | -11                  | -18  | -44  | -2   | -3   |
| 71  | NIEDERJOCH F.        | AT0217  | 1883  | 2005 | C      | -36                  | -84  | -17  | -46  | -31  |
| 72  | OBERSULZBACH K.      | AT0502  | 1815  | 2005 | C      | -3                   | -48  | -27  | -22  | -62  |
| 73  | OCHSENTALERGL.       | AT0103  | 1891  | 2005 | C      | -15                  | -14  | -8   | -25  | -19  |
| 74  | OEDENWINKEL K.       | AT0712  | 1850  | 2005 | C      | -4                   | -10  | -7   | -6   | -9   |
| 75  | PASTERZE             | AT0704  | 1807  | 2005 | C      | -26                  | -33  | -13  | -22  | -25  |
| 76  | PAFFEN F.            | AT0324  | 1981  | 2005 | C      | -8                   | -6   | -5   | -5   | -1   |
| 77  | PRAEGRAT K.          | AT0603  | 1963  | 2005 | C      | -6                   |      | -7   | -4   |      |
| 78  | RETENBACH F.         | AT0212  | 1889  | 2005 | C      | -15                  | -39  | -15  | -11  | -13  |
| 79  | ROFENKAR F.          | AT0215  | 1892  | 2005 | C      | -10                  |      | -6   | -5   | -9   |
| 80  | ROTER KNOPF K.       | AT      | 2002  | 2005 | C      | -1                   | -1   | -1   | SN   | 0    |
| 81  | ROTMOOS F.           | AT0224  | 1847  | 2005 | C      | -23                  | -19  | -8   | -11  | -8   |
| 82  | SCHALF F.            | AT0219  | 1925  | 2005 | C      | -52                  | -87  | -49  | -29  | -17  |
| 83  | SCHAUFEL F.          | AT0311  | 1912  | 2004 | C      | -32                  |      |      |      |      |
| 84  | SCHLADMINGER G.      | AT1103  | 1884  | 2005 | C      | 0                    |      | -2   | -2   | -1   |
| 85  | SCHLATEN K.          | AT0506  | 1857  | 2005 | C      | -15                  | -18  | -16  | -9   | -11  |
| 86  | SCHLEGEIS K.         | AT0405  | 1897  | 2005 | E      | -X                   |      |      |      |      |
| 87  | SCHMIEDINGER K.      | AT0726  | 1952  | 2005 | C      | -70                  |      | -9   | -22  | -20  |
| 88  | SCHNEEGLOCKEN        | AT0109  | 1974  | 2005 | C      | -5                   | -9   | -5   | -6   | -6   |
| 89  | SCHNEELOCH G.        | AT1104  | 1969  | 2005 | C      | -4                   |      | -8   | 0    | -11  |
| 90  | SCHWARZENBERG F.     | AT0303  | 1891  | 2005 | C      | -14                  | -24  | -20  | -11  | -4   |
| 91  | SCHWARZENSTEIN       | AT0403  | 1882  | 2005 | C      | -20                  | -15  |      |      |      |
| 92  | SCHWARZKARL K.       | AT0716  | 1963  | 2005 | C      | -8                   | -11  | -22  | -14  | -10  |
| 93  | SCHWARZKOEPL K.      | AT0710  | 1955  | 2005 | C      | -6                   | -10  |      |      |      |
| 94  | SEXEGERTEN F.        | AT0204  | 1883  | 2005 | C      | -16                  | -14  | -18  | -18  | -19  |
| 95  | SIMILAUN F.          | AT      | 2003  | 2005 | —      |                      | -48  | -20  | -17  | -10  |
| 96  | SIMMING F.           | AT0318  | 1892  | 2005 | C      | -19                  | -10  |      |      |      |
| 97  | SIMONY K.            | AT0511  | 1897  | 2005 | C      | -13                  | -30  | -19  | -5   | -26  |
| 98  | SPIEGEL F.           | AT0221  | 1892  | 2005 | C      | -3                   | -12  | -10  | -24  | -6   |
| 99  | STUB. SONNBLICK KEES | AT0601A | 1961  | 2005 | C      | -6                   | -8   | -2   | -15  | -14  |
| 100 | SULZENAUF F.         | AT0314A | 1891  | 2005 | C      | -7                   | -10  | -8   | -21  | -23  |
| 101 | SULZTAL F.           | AT0301  | 1898  | 2005 | C      | -28                  | -45  | -42  | -31  | -4   |
| 102 | TASCHACH F.          | AT0205  | 1878  | 2005 | C      | -1                   | -14  | -7   | -13  | -19  |
| 103 | TOTENFELD            | AT0110  | 1975  | 2005 | C      | -2                   | -31  | -8   | -11  | -14  |
| 104 | TOTENKOPF K.         | AT      | 1971  | 2005 | C      | -1                   | -25  | -14  | -5   | 0    |
| 105 | TRIEBENKARLAS F.     | AT0323  | 1978  | 2005 | C      | -38                  | -22  | -33  | -38  | -19  |
| 106 | UMBAL K.             | AT0512  | 1897  | 2005 | C      | -12                  | -26  | -12  | -27  | -13  |
| 107 | UNT. RIFFL KEES      | AT0713B | 1961  | 2005 | C      | -6                   | -8   | -8   | -4   | -6   |
| 108 | UNTERSULZBACH K.     | AT0503  | 1829  | 2005 | C      | -19                  | -30  | -10  | -18  | -27  |
| 109 | VERBORGENBERG F.     | AT0322  | 1977  | 2005 | C      | -3                   | -11  | -8   | -4   | -4   |
| 110 | VERMUNTGL.           | AT0104  | 1903  | 2005 | C      | -16                  | -15  | -9   | -9   | -27  |
| 111 | VERNAGT FERNER       | AT0211  | 1889  | 2005 | C      | -32                  | -37  | -45  | -30  | -58  |
| 112 | VILTRAGEN K.         | AT0505  | 1892  | 2005 | C      | -6                   | -30  | -42  | -39  | -40  |
| 113 | W.TRIPP K.           | AT1004  | 1928  | 2004 | C      | -8                   |      |      | -9   |      |
| 114 | WASSERFALLWINKL      | AT0705  | 1944  | 2005 | C      | -6                   | -9   | -17  | -18  | -72  |
| 115 | WAXEGG K.            | AT0401  | 1882  | 2005 | C      | -25                  | -24  | -10  | -34  | -13  |
| 116 | WEISSEE F.           | AT0201  | 1891  | 2005 | C      | -17                  | -96  | -20  | -19  | -24  |
| 117 | WESTL. GRUEBLER F. W | AT      | 1975  | 2005 | —      | 2                    | -2   |      |      |      |

| NR             | GLACIER NAME          | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|----------------|-----------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|                |                       |         |       |      |        | 2006                 | 2007 | 2008 | 2009 | 2010 |
| 118            | WIELINGER K.          | AT0725  | 1897  | 2005 | E      | -X                   |      | SN   |      |      |
| 119            | WILDGERLOS            | AT0404  | 1913  | 2005 | C      | -10                  | -13  | -9   | -21  | -18  |
| 120            | WINKL K.              | AT1006  | 1928  | 2004 | -      |                      |      |      | -7   | -1   |
| 121            | WURTEN K.             | AT0804  | 1850  | 2005 | C      | -14                  | -18  | -8   | -8   | -13  |
| 122            | ZETTALUNITZ K.        | AT0508  | 1897  | 2005 | C      | -24                  | -14  | -17  | -16  | -13  |
| <u>BOLIVIA</u> |                       |         |       |      |        |                      |      |      |      |      |
| 123            | CHACALTAYA            | BO5180  | 1983  | 2005 | C      | -14                  | -17  | -18  |      |      |
| 124            | CHARQUINI SUR         | BO      | 2006  |      | C      | -55                  | -76  | -5   |      |      |
| 125            | ZONGO                 | BO5150  | 1992  | 2005 | C      | -12                  | -16  | -11  | -9   | -9   |
| <u>CANADA</u>  |                       |         |       |      |        |                      |      |      |      |      |
| 126            | CASTLE CREEK          | CA      | 1959  | 2005 | E      | -19                  | -11  | -18  | -17  | -15  |
| <u>CHILE</u>   |                       |         |       |      |        |                      |      |      |      |      |
| 127            | LENGUA                | CL1019  | 1870  | 1998 | D      |                      | -450 |      |      |      |
| 128            | NOROESTE              | CL      | 1984  | 2002 | D      |                      | -368 |      |      |      |
| 129            | OESTE M               | CL      | 1986  | 2002 | D      |                      | -108 |      |      |      |
| 130            | OESTE N               | CL      | 1986  | 2002 | D      |                      | -250 |      |      |      |
| 131            | OESTE S L             | CL      | 1986  | 2002 | D      |                      | -81  |      |      |      |
| 132            | OESTE S R             | CL      | 1986  | 2002 | D      |                      | -157 |      |      |      |
| <u>CHINA</u>   |                       |         |       |      |        |                      |      |      |      |      |
| 133            | HAILUOGOU             | CN0031  | 1930  | 2004 | D      | -50                  | -56  |      |      |      |
| 134            | KANGWURE              | CN      | 1991  | 2001 | C      | -16                  | -13  | -12  |      |      |
| 135            | URUMQI GLACIER NO. 1  | CN0010  | 1973  | 1995 | C      | -X                   | -X   | -X   | -4   | -X   |
| 136            | URUMQI NO. 1 E-BRANCH | CN0001  | 1996  | 2005 | C      | -X                   | -X   | -X   | -4   | -X   |
| 137            | URUMQI NO. 1 W-BRANCH | CN0002  | 1996  | 2005 | C      | -X                   | -X   | -X   | -7   | -X   |
| <u>C.I.S.</u>  |                       |         |       |      |        |                      |      |      |      |      |
| 138            | ASHU-TOR SOUTH (326)  | SU      | 1943  | 1990 | D      | -370                 |      |      |      |      |
| 139            | BIRDZHALYCHIRAN       | SU3026  | 1957  | 1997 | D      |                      | -20  |      |      |      |
| 140            | BITYUKTYUBE           | SU3034  | 1957  | 1997 | D      |                      | 4    |      |      |      |
| 141            | BOLSHOY AZAU          | SU3004  | 1857  | 2002 | D      |                      | -140 |      |      |      |
| 142            | BOLSHOY CHONTOR       | SU      | 1956  | 1990 | D      | -310                 |      |      |      |      |
| 143            | CHUNGURCHATCHIR       | SU3027  | 1957  | 1997 | D      |                      | -14  |      |      |      |
| 144            | GARABASHI             | SU3031  | 1957  | 1997 | D      |                      | -3   |      |      |      |
| 145            | GREGORIEV             | SU      | 1956  | 1990 | D      | -200                 |      |      |      |      |
| 146            | IRIK                  | SU3029  | 1957  | 1997 | D      |                      | -11  |      |      |      |
| 147            | IRIKCHAT              | SU3028  | 1957  | 1997 | D      |                      | -11  |      |      |      |
| 148            | KARACHAUL             | SU3022  | 1957  | 1997 | D      |                      | -1   |      |      |      |
| 149            | KOLPAKOVSKY           | SU      | 1943  | 1990 | D      | -510                 |      |      |      |      |
| 150            | KYUKYURTLYU           | SU3033  | 1957  | 1997 | D      |                      | -1   |      |      |      |
| 151            | LEVYIY AKTRU          | SU7102  | 1976  | 2008 | C      |                      |      |      | -6   |      |
| 152            | MALIY AKTRU           | SU7100  | 1936  | 2008 | C      |                      |      |      | -10  |      |
| 153            | MALIY AZAU            | SU3032  | 1957  | 1997 | D      |                      | -5   |      |      |      |
| 154            | MIKELCHIRAN           | SU3025  | 1957  | 1997 | D      |                      | -6   |      |      |      |
| 155            | NO. 125 (VODOPADNIY)  | SU7105  | 1986  | 2008 | C      |                      |      |      | -3   |      |
| 156            | NO.211                | SU      | 1943  | 1990 | D      | -300                 |      |      |      |      |
| 157            | NO.324                | SU      | 1943  | 1990 | D      | -230                 |      |      |      |      |
| 158            | NO.392                | SU      | 1943  | 1990 | D      | -130                 |      |      |      |      |
| 159            | NO.393                | SU      | 1943  | 1990 | D      | -100                 |      |      |      |      |
| 160            | NO.394                | SU      | 1943  | 1990 | D      | -140                 |      |      |      |      |
| 161            | POPOV                 | SU      | 1956  | 1990 | D      | -215                 |      |      |      |      |
| 162            | TERSKOL               | SU3030  | 1957  | 1997 | D      |                      | 0    |      |      |      |
| 163            | TS.TUYUKSUYSKIY       | SU5075  | 1908  | 2005 | C      | -12                  | -46  | -39  |      | -26  |
| 164            | ULLUCHIRAN            | SU3021  | 1957  | 1997 | D      |                      | -4   |      |      |      |
| 165            | ULLUKOL               | SU3023  | 1957  | 1997 | D      |                      | -7   |      |      |      |
| 166            | ULLUMALIENDERKU       | SU3024  | 1957  | 1997 | D      |                      | -1   |      |      |      |

| NR        | GLACIER NAME           | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|-----------|------------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|           |                        |         |       |      |        | SURVEY               | 2006 | 2007 | 2008 | 2009 |
| COLOMBIA  |                        |         |       |      |        |                      |      |      |      |      |
| 167       | LA CONEJERA            | CO0033  | 2000  | 2000 | C      |                      |      |      | -16  | -30  |
| ECUADOR   |                        |         |       |      |        |                      |      |      |      |      |
| 168       | ANTIZANA15ALPHA        | EC0001  | 1965  | 2005 | C      | -10                  | -7   | 8    | 19   | 7    |
| FRANCE    |                        |         |       |      |        |                      |      |      |      |      |
| 169       | ARGENTIERE             | FR0002  | 1883  | 2005 | C      | -26                  | -27  | -38  |      | -71  |
| 170       | BLANC                  | FR0031  | 1899  | 2005 | —      | -53                  | -27  | -5   | -64  | -9   |
| 171       | BOSSONS                | FR0004  | 1874  | 2005 | C      | -48                  | -57  | -18  | -20  | -42  |
| 172       | GEBROULAZ              | FR0009  | 1908  | 2005 | C      | -X                   | -8   |      |      |      |
| 173       | MER DE GLACE           | FR0003  | 1866  | 2005 | —      | 15                   | -24  | -76  | -56  | -34  |
| 174       | OSSOUE                 | FR      | 1874  | 2005 | C      | -17                  | -35  | 0    | -12  | 0    |
| 175       | SAINT SORLIN           | FR0015  | 1923  | 2005 | C      | -48                  | -X   |      |      |      |
| GREENLAND |                        |         |       |      |        |                      |      |      |      |      |
| 176       | AKULLIIT               | GL      | 1880  | 2001 | D      |                      |      |      |      | -280 |
| 177       | ASSAKAAT               | GL      | 1875  | 2001 | D      |                      |      |      |      | -45  |
| 178       | FREYA                  | GL      | 1947  | 1985 | D      |                      |      | -170 |      |      |
| 179       | KANGIUSAQ              | GL      | 1884  | 2000 | D      |                      |      |      | -84  |      |
| 180       | MITTIVAKKAT            | GL0019  | 1931  | 2005 | D      |                      |      |      | 0    | -15  |
| 181       | MOTZFELDT E            | GL      | 1920  | 2002 | D      |                      |      | -40  |      |      |
| 182       | MOTZFELDT W            | GL      | 1920  | 2002 | D      |                      |      | -80  |      |      |
| 183       | NAPASORSUAQ            | GL      | 1951  | 2002 | D      |                      |      |      |      | -30  |
| 184       | NARSSAQ BRAE           | GL0005  | 1946  | 2000 | D      |                      |      | -109 |      |      |
| 185       | QINGUA KUJALLEQ        | GL      | 1884  | 2000 | D      |                      |      |      | -42  |      |
| 186       | SAARLOQ                | GL      | 1930  | 2000 | D      |                      |      |      | -90  |      |
| 187       | SAQQAQ                 | GL      | 1869  | 2001 | D      |                      |      |      |      | -117 |
| 188       | SERMIARSUIT            | GL      | 1850  | 2001 | D      |                      |      |      |      | -30  |
| 189       | SERMIKASSAK            | GL      | 1879  | 2001 | D      |                      |      |      |      | -100 |
| 190       | SERMINNGUAQ            | GL      | 1885  | 2000 | D      |                      |      |      |      | -172 |
| 191       | SERMITSIAQ             | GL      | 1876  | 2002 | D      |                      |      |      |      | -361 |
| 192       | SISSARISSUT            | GL      | 1884  | 2000 | D      |                      |      |      |      | -115 |
| 193       | SOQQAAP                | GL      | 1875  | 2001 | D      |                      |      |      |      | -58  |
| 194       | TUNORSUAQ              | GL      | 1893  | 2005 | D      |                      |      |      |      | -30  |
| 195       | UMIARTORFIUP           | GL      | 1875  | 2001 | D      |                      |      |      |      | -25  |
| ICELAND   |                        |         |       |      |        |                      |      |      |      |      |
| 196       | BAEGISARJOEKULL        | IS0304  | 1957  | 2003 | —      |                      | 0    |      |      |      |
| 197       | BLAGNIPUJOEKULL        | IS      | 1998  | 2005 | A      | -85                  |      | -36  |      | -159 |
| 198       | BREIDAMJOEKULL W. A.   | IS1125A | 1934  | 2005 | A      | -95                  | -50  | -20  |      |      |
| 199       | BREIDAMJOEKULL W. C.   | IS1125C | 1933  | 2005 | A      | -50                  | -90  | -60  | -95  | -30  |
| 200       | BROKARJOEKULL          | IS1427  | 1936  | 1994 | C      |                      |      |      | -287 | -87  |
| 201       | FALLJOEKULL            | IS1021  | 1958  | 2005 | A      | -34                  | -40  | -40  | -41  | -64  |
| 202       | FJALLSJOEK. BY BREID.  | IS1024A | 1934  | 2005 | A      | -10                  | -5   | -5   | -25  |      |
| 203       | FJALLSJOEK. BY GAMLAS. | IS1024C | 1934  | 2005 | A      | -25                  | -26  | -35  | -25  | -40  |
| 204       | FLAAJOEKULL E 148      | IS1930C | 1931  | 2000 | —      |                      |      |      | -355 | -67  |
| 205       | GEITLANDSJOEKULL       | IS      | 2003  | 2005 | A      | -66                  | -63  | -33  | -37  | -37  |
| 206       | GIGJOEKULL             | IS0112  | 1934  | 2005 | A      | -180                 | -80  |      | -53  | -85  |
| 207       | GLJUFURARJOEKULL       | IS0103  | 1933  | 2005 | A      | -51                  | -9   | -12  | -3   | -16  |
| 208       | HAGAFELLSJOEKULL E     | IS0306  | 1902  | 2003 | A      |                      | -270 |      | -166 | -79  |
| 209       | HEINABERGSJOEKULL      | IS1829A | 1990  | 2004 | A      | 65                   | -70  | 48   | 62   | -1   |
| 210       | HYRNINGSJOEKULL        | IS0100  | 1933  | 2005 | A      | 8                    | -45  | -21  | -12  | -30  |
| 211       | JOEKULKROKUR           | IS0007  | 1936  | 2003 | A      | -43                  |      | -38  | -20  |      |
| 212       | KALDALONSJOEKULL       | IS0102  | 1931  | 2005 | A      | -8                   | -13  | -58  | SN   | -32  |
| 213       | KIRKJUJOEKULL          | IS      | 1998  | 2005 | A      | -18                  |      | -66  |      | -75  |
| 214       | KOETLUJOEKULL          | IS      | 1993  | 2005 | A      | -9                   | 0    | -46  | -40  |      |
| 215       | KVERKJOEKULL           | IS2500  | 1971  | 2000 | —      |                      |      |      |      | -92  |
| 216       | KVISLAJOEKULL          | IS      | 2003  | 2005 | A      | -45                  | -11  | -49  |      | -52  |
| 217       | LEIRUFJARDARJOEKULL    | IS0200  | 1886  | 2003 | A      | -63                  | -5   | -55  | -35  | -98  |
| 218       | LODMUNDARJOEKULL       | IS0108  | 1936  | 2005 | A      | -5                   |      | -50  |      |      |

| NR           | GLACIER NAME             | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|--------------|--------------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|              |                          |         |       |      |        | 2006                 | 2007 | 2008 | 2009 | 2010 |
| 219          | MORSARJOEKULL            | IS0318  | 1935  | 2004 | A      | -55                  |      | -50  |      | -79  |
| 220          | MULAJOEKULL S            | IS0311A | 1935  | 2004 | A      | -130                 | -25  | -15  | 10   | -26  |
| 221          | NAUTHAGAJOEKULL          | IS0210  | 1935  | 2005 | A      | -23                  | -32  | -39  | -13  | -37  |
| 222          | OELDUFELLSJOEKULL        | IS0114  | 1967  | 2005 | A      |                      |      |      | -310 |      |
| 223          | REYKJAFJARDARJOEKULL     | IS0300  | 1914  | 2005 | A      | 32                   | -1   | 4    | -3   | -5   |
| 224          | RJUPNABREKKUJOEKULL      | IS      | 2001  | 2005 | A      | -23                  | -26  | -12  | -19  | -81  |
| 225          | SATUJOEKULL              | IS0530  | 1991  | 2004 | A      | -20                  | -12  | -93  |      | -75  |
| 226          | SIDUJOEKULL E M 177      | IS0015B | 1934  | 2003 | A      |                      | -300 |      |      |      |
| 227          | SKAFTAFELLSJOEKULL       | IS0419  | 1934  | 2005 | —      | -27                  |      | -89  | -82  | -50  |
| 228          | SKALAFELLSJOEKULL        | IS1728A | 1935  | 2005 | A      |                      |      |      |      | -473 |
| 229          | SKEIDARARJOEKULL E1      | IS0117A | 1951  | 2005 | A      | -6                   | -48  | 4    | -86  | -15  |
| 230          | SKEIDARARJOEKULL E2      | IS0117B | 1932  | 2005 | A      | -6                   | -71  | 22   | 38   | -26  |
| 231          | SKEIDARARJOEKULL E3      | IS0117C | 1932  | 2005 | A      | 6                    |      |      |      |      |
| 232          | SKEIDARARJOEKULL M       | IS      | 1991  | 2005 | A      | -60                  | -140 | -60  |      |      |
| 233          | SKEIDARARJOEKULL W       | IS0116  | 1932  | 2005 | A      | -200                 | 0    | -160 | -155 | -155 |
| 234          | SLETTJOEKULL             | IS      | 2002  | 2004 | A      | -150                 |      |      |      | -259 |
| 235          | SOLHEIMAJOEKULL W        | IS0113A | 1931  | 2005 | A      | -62                  | -81  | -134 | -47  | -55  |
| 236          | SVINAFELLSJOEKULL        | IS0520A | 1951  | 2005 | A      | -4                   | -2   | -12  | 8    | -3   |
| 237          | TUNGAARJOEKULL           | IS2214  | 1946  | 2005 | A      |                      | -138 | -50  | -106 | -106 |
| <u>INDIA</u> |                          |         |       |      |        |                      |      |      |      |      |
| 238          | CHORABARI                | IN      | 2003  | 2003 | —      |                      |      | -49  |      |      |
| 239          | DRANG DRUNG              | IN      | 1990  | 2005 | E      | -25                  |      | -47  |      |      |
| 240          | GANGOTRI                 | IN0019  | 1849  | 2004 | D      | 0                    | -10  |      |      |      |
| 241          | GANGSTANG                | IN0077  | 1978  | 1978 | —      |                      |      | -485 |      |      |
| 242          | GLACIER NO. 10           | IN      | 1990  | 2005 | E      | -16                  |      |      |      |      |
| 243          | GLACIER NO. 12           | IN      | 2000  | 2005 | E      | -45                  |      |      |      |      |
| 244          | GLACIER NO. 13           | IN      | 1992  | 2005 | E      | 21                   |      |      |      |      |
| 245          | GLACIER NO. 9            | IN      | 1990  | 2005 | E      | -141                 |      |      |      |      |
| 246          | HAMTAH                   | IN      | 1998  | 2005 | —      | -15                  |      |      |      |      |
| 247          | MILAM                    | IN0037  | 1906  | 1999 | D      | -296                 |      |      |      |      |
| 248          | MULKILA                  | IN0070  | 2006  |      | C      | -635                 |      |      |      |      |
| 249          | PANCHI NALA I            | IN0046  | 1979  | 1979 | —      |                      | -325 |      |      |      |
| 250          | PANCHI NALA II           | IN0048  | 1979  | 1979 | —      |                      | -375 |      |      |      |
| 251          | PARKACHICK               | IN      | 1990  | 2004 | E      |                      |      | -7   |      |      |
| 252          | TINGAL GOH               | IN0088  | 1978  | 1978 | —      |                      |      | -315 |      |      |
| 253          | YOCHÉ LUNGPA             | IN0079  | 2006  |      | C      | -840                 |      |      |      |      |
| <u>ITALY</u> |                          |         |       |      |        |                      |      |      |      |      |
| 254          | AGNELLO MER.             | IT0029  | 1927  | 2005 | C      | -7                   | -1   | -1   |      |      |
| 255          | ALTA (VEDR.) / HOHENF.   | IT0730  | 1924  | 2005 | C      | -20                  | -17  | -14  | -4   | -6   |
| 256          | AMOLA                    | IT0644  | 1949  | 2005 | C      | -8                   | -18  | -2   | -5   | -16  |
| 257          | ANTELAO INFER. (OCC.)    | IT0967  | 1952  | 2005 | C      | -4                   | -2   | 0    | SN   | SN   |
| 258          | ANTELAO SUP.             | IT0966  | 1952  | 2005 | C      | -4                   | -10  | -1   | -2   | -9   |
| 259          | AQUILLE                  | IT0138  | 1972  | 2005 | C      | -4                   | 2    | 2    |      | -20  |
| 260          | BASEI                    | IT0064  | 1961  | 2005 | C      | SN                   | -2   | -3   | -4   | -14  |
| 261          | BELVEDERE (MACUGNAGA)    | IT0325  | 1922  | 2005 | C      | 0                    | -4   | 0    | -13  |      |
| 262          | BESSANESE                | IT0040  | 1947  | 2005 | C      | -2                   | -2   | 0    | 0    | 3    |
| 263          | BRENA                    | IT0219  | 1925  | 2004 | C      |                      |      | -X   | -109 |      |
| 264          | CALDERONE                | IT1006  | 1947  | 2005 | C      | ST                   | ST   | ST   |      | ST   |
| 265          | CAMPO SETT.              | IT0997  | 1949  | 2005 | C      | -X                   | -21  | -18  | -4   | -10  |
| 266          | CARE ALTO OR.            | IT0632  | 1953  | 2001 | C      |                      |      | -35  |      |      |
| 267          | CARESER                  | IT0701  | 1898  | 2005 | E      |                      |      |      |      | -170 |
| 268          | CASPOGGIO                | IT0435  | 1927  | 2005 | C      |                      |      |      | -13  | -2   |
| 269          | CASSANDRA OR.            | IT0411  | 1927  | 2001 | C      | -47                  | -7   | -22  | -2   | 0    |
| 270          | CASTELLI OR.             | IT0493  | 1928  | 2001 | C      |                      |      |      | -30  |      |
| 271          | CEDEC                    | IT0503  | 1926  | 1975 | C      | -19                  | -5   | -9   | -13  | -9   |
| 272          | CEV. FORCOLA/FUERKELEF.  | IT0731  | 1899  | 2001 | C      | -53                  | -49  | -20  | -6   | -37  |
| 273          | CEV. PRINCIPALE/ZUFALLF. | IT0732  | 1899  | 2005 | C      | -39                  | -27  | -21  | -58  | -99  |
| 274          | CIAMARELLA               | IT0043  | 1928  | 2001 | C      | -2                   | -3   | -20  | -8   | -2   |
| 275          | CIARDONEY                | IT0081  | 1973  | 2005 | C      | -26                  | -10  | -26  | 0    | -5   |

| NR  | GLACIER NAME               | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|-----|----------------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|     |                            |         |       |      |        | SURVEY               | 2006 | 2007 | 2008 | 2009 |
| 276 | CLAPIER                    | IT0001  | 1924  | 1999 | C      | -26                  | -8   |      |      |      |
| 277 | COL DELLA MARE I           | IT0506A | 1925  | 2001 | C      |                      |      |      | -95  |      |
| 278 | COLLALTO (V. DI)/HOCHG..   | IT0927  | 1974  | 2005 | C      | -11                  | -7   |      | -77  |      |
| 279 | COLLERIN D'ARNAS           | IT0042  | 1973  | 2001 | C      | -5                   | 0    | -1   | 0    | 0    |
| 280 | COUPE DE MONEY             | IT0109  | 1927  | 2001 | C      | -20                  | -17  | -24  | -17  | -17  |
| 281 | CRISTALLO                  | IT0937  | 1927  | 1998 | C      | -4                   | -181 |      |      |      |
| 282 | DISGRAZIA                  | IT0419  | 1926  | 2001 | C      | -32                  | -76  | -2   | -4   | -12  |
| 283 | DOSEGU                     | IT0512  | 1926  | 2005 | C      | -15                  | -15  | -32  | -12  | -19  |
| 284 | DZASSET                    | IT0113  | 1996  | 2001 | C      | -12                  | -4   | -10  | -5   | -9   |
| 285 | ESTELLETTTE                | IT0208  | 1953  | 2000 | C      | -10                  | -8   |      |      |      |
| 286 | FOND OCCID.                | IT0146  | 1986  | 2001 | C      | -4                   | -2   |      | -1   | -15  |
| 287 | FOND OR.                   | IT0145  | 1963  | 2001 | C      | -2                   | 0    | -1   | 0    | -3   |
| 288 | FONT. BIANCA / WEISSBF.    | IT0713  | 1926  | 1993 | C      |                      |      |      | SN   | -16  |
| 289 | FORNI                      | IT0507  | 1863  | 2005 | C      | -28                  | -10  | -13  | -7   | -11  |
| 290 | FOURNEAUX                  | IT0027  | 1905  | 2001 | C      | -1                   | -2   |      |      |      |
| 291 | FRADUSTA                   | IT0950  | 1948  | 2005 | C      |                      |      | -30  |      |      |
| 292 | GLIAIRETTA VAUDET          | IT0168  | 1948  | 2000 | C      | -18                  | -46  | -20  | -9   | -6   |
| 293 | GOLETTA                    | IT0148  | 1928  | 2005 | C      | -14                  | -10  | -6   | -3   |      |
| 294 | GRAN PILASTRO/GLIEDERF.    | IT0893  | 1926  | 2005 | C      | -20                  | -23  | -29  | -32  | -20  |
| 295 | GRAN VAL                   | IT0115  | 1986  | 2000 | C      | -12                  | -10  | -8   |      | -40  |
| 296 | GRAN VEDR. OCC. / HOCHF.   | IT0884  | 2006  |      | C      | -19                  | -22  | -28  | 2    | -7   |
| 297 | GRAN VEDR. OR. / GRIESSEF. | IT0883  | 2006  |      | C      | -1                   | -14  | -19  | 13   | -11  |
| 298 | GRAN ZEBRU                 | IT0502  | 1926  | 1975 | C      | -9                   | -12  | -11  | -13  |      |
| 299 | GRAND CROUX CENTR.         | IT0111  | 1903  | 2001 | C      | -12                  | -10  | -14  | -163 | -10  |
| 300 | GRAND ETRET                | IT0134  | 1951  | 2000 | C      | -20                  | -10  |      |      |      |
| 301 | GRUETTA ORIENT.            | IT0232  | 1995  | 2001 | C      |                      |      | -28  | -10  | 0    |
| 302 | INDREN OCC.                | IT0306  | 1922  | 2000 | C      | -25                  | -9   | -2   |      | -9   |
| 303 | JUMEAUX                    | IT0280  | 1928  | 2001 | C      |                      |      | 32   | -2   | -1   |
| 304 | LA MARE (VEDRETTA DE)      | IT0699  | 1897  | 2005 | C      |                      |      | -25  | -35  |      |
| 305 | LANA / AEUSS. LAHNER K.    | IT0913  | 1977  | 2005 | C      |                      |      | -104 | -10  | -29  |
| 306 | LARES                      | IT0634  | 1920  | 2005 | C      | -38                  | -28  | -49  |      |      |
| 307 | LAUSON                     | IT0116  | 1928  | 2005 | C      | -8                   | -8   | -6   | -9   | -8   |
| 308 | LAVACCIU                   | IT0129  | 1933  | 2001 | C      | -14                  | -40  | -11  | -2   | -9   |
| 309 | LAVASSEY                   | IT0144  | 1928  | 2001 | C      | -24                  | -24  | -5   | -12  | -16  |
| 310 | LOBBIA                     | IT0637  | 1899  | 2005 | C      | -1                   | -24  |      | -22  |      |
| 311 | LOCCE SETT.                | IT0321  | 1986  | 2001 | C      | -11                  | -12  | -X   |      |      |
| 312 | LUNGA (VED.) / LANGENF.    | IT0733  | 1901  | 2005 | C      | -46                  | -42  | -44  | -23  | -58  |
| 313 | LUPO                       | IT0543  | 1936  | 2005 | C      | -5                   | -4   | 0    | SN   | SN   |
| 314 | LYS                        | IT0304  | 1902  | 2005 | C      | -30                  | -45  | -6   | -23  | -19  |
| 315 | MALAVALLE / UEBELTALF.     | IT0875  | 1915  | 2005 | C      | -10                  | -13  | -14  | -8   | -50  |
| 316 | MANDRONE                   | IT0639  | 1911  | 2005 | C      | -12                  | -24  | -5   | -6   | -21  |
| 317 | MARMOLADA CENTR.           | IT0941  | 1902  | 2005 | C      | 4                    | -8   | -17  | -4   | 3    |
| 318 | MAROVIN                    | IT0541  | 1953  | 2001 | C      | -11                  | -38  | -6   |      |      |
| 319 | MARTELOT                   | IT0049  | 1928  | 2001 | C      | -2                   | -X   | 0    | 0    | 0    |
| 320 | MONCIAIR                   | IT0132  | 1951  | 2001 | C      | -13                  | -72  | -2   | -16  | -8   |
| 321 | MONCORVE                   | IT0131  | 1928  | 2001 | C      | -12                  | -8   | -4   | -2   | -6   |
| 322 | MONEY                      | IT0110  | 1903  | 2001 | C      |                      |      | -17  | -4   | -16  |
| 323 | MONTANDEYNE                | IT0128  | 1929  | 2000 | C      | -29                  | -6   | -16  | -17  | -1   |
| 324 | MORION OR.                 | IT0180  | 1938  | 1974 | C      | -3                   | -3   | -12  | -5   | -3   |
| 325 | MULINET MERID.             | IT0047  | 1955  | 2001 | C      | -1                   | -X   |      |      |      |
| 326 | MULINET SETT.              | IT0048  | 1907  | 2001 | C      | -2                   | -3   | -X   |      | -36  |
| 327 | NARDIS OCC.                | IT0640  | 1927  | 2004 | C      |                      |      | -6   |      |      |
| 328 | NEL CENTRALE               | IT0057  | 1959  | 2000 | C      | -86                  | -32  | -6   |      | -1   |
| 329 | NEVES OR. / NOEFESF. OEST. | IT0902  | 1910  | 2004 | C      |                      |      | -8   | -55  |      |
| 330 | NISCLI                     | IT0633  | 1920  | 2005 | C      |                      |      | -39  |      | -12  |
| 331 | PALON D. MARE LOBO C..     | IT0506B | 2008  |      | C      |                      |      | -18  | -6   | -21  |
| 332 | PALON D. MARE LOBO OR.     | IT0506C | 1990  | 2001 | C      | -14                  | -22  | -8   | -15  | -10  |
| 333 | PEIRABROC                  | IT0002  | 1924  | 1999 | C      | -5                   | -12  |      |      |      |
| 334 | PENDENTE / HANGENDERF.     | IT0876  | 1923  | 2005 | C      | -2                   | -18  | -8   | -3   | -3   |
| 335 | PIODE                      | IT0312  | 1915  | 2005 | C      | -5                   | -9   | -11  | -11  | -12  |
| 336 | PISGANA OCC.               | IT0577  | 1918  | 2005 | C      | -54                  | -19  | -24  | -34  | -14  |

| NR  | GLACIER NAME                 | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|-----|------------------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|     |                              |         |       |      |        | 2006                 | 2007 | 2008 | 2009 | 2010 |
| 337 | PIZZO FERRE                  | IT0365  | 1927  | 2001 | C      |                      |      | 0    | -2   | -1   |
| 338 | PIZZO SCALINO                | IT0443  | 1899  | 2005 | C      | -37                  | -23  | -7   | -29  | -9   |
| 339 | PRE DE BAR                   | IT0235  | 1904  | 2005 | C      | -32                  | -15  | -27  | -30  | -30  |
| 340 | PREDAROSSA                   | IT0408  | 1916  | 2001 | C      |                      | -21  | -5   | -20  | 2    |
| 341 | QUAIRA BIANCA/WEISSK.F.      | IT0889  | 1930  | 2005 | C      | -27                  | -27  | -43  | -19  | -30  |
| 342 | RIES OCC./RIESERF. WESTL.    | IT0930  | 1973  | 2005 | C      | -5                   | -10  | -19  | -3   | -21  |
| 343 | RIES OR.C./RIESERF. OEST.Z.  | IT0929  | 1974  | 2005 | C      | -28                  | -52  | -23  | -12  | -11  |
| 344 | ROSIM (VEDR. DI) / ROSIMF.   | IT0754  | 1898  | 2005 | C      | -9                   | -38  |      | -6   | -X   |
| 345 | ROSSO DESTRO                 | IT0920  | 1930  | 2005 | C      |                      |      | -19  | -6   | 3    |
| 346 | RUTOR                        | IT0189  | 1927  | 2005 | C      | -12                  | -14  | -3   | -3   | -3   |
| 347 | SCERCEN INFERIORE            | IT0432  | 1897  | 2001 | C      | -125                 | -X   | -5   | -5   |      |
| 348 | SEA                          | IT0046  | 1928  | 2001 | C      | -18                  | -16  | -62  | 0    | -14  |
| 349 | SFORZELLINA                  | IT0516  | 1926  | 2005 | C      | -2                   | -6   |      | -3   | -4   |
| 350 | SISSONE                      | IT0422  | 1927  | 2001 | C      | -5                   | -16  | -155 | -170 | -5   |
| 351 | SOCHES TSANTELEINA           | IT0147  | 1951  | 2001 | C      | -42                  | -10  | -18  | -15  | -14  |
| 352 | SOLDA (VED. DI) / SULDENF.   | IT0762  | 1923  | 1995 | C      | -8                   | -10  |      | -6   | -X   |
| 353 | SURETTA MERID.               | IT0371  | 1927  | 2005 | C      | -1                   | -4   | -23  | 0    | 0    |
| 354 | TORRENT                      | IT0155  | 1962  | 2001 | C      | -4                   | -11  | -9   | -5   | -15  |
| 355 | TOULES                       | IT0221  | 1933  | 2004 | C      |                      |      | -30  | -17  | -16  |
| 356 | TRAVIGNOLO                   | IT0947  | 1953  | 2005 | C      |                      |      | -10  |      |      |
| 357 | TRIBOLAZIONE                 | IT0112  | 1927  | 2001 | C      | -10                  | -6   | -9   | -124 | -26  |
| 358 | TZA DE TZAN                  | IT0259  | 1926  | 2001 | —      |                      |      | -X   |      |      |
| 359 | VAL VIOLA OCC.               | IT0477  | 1932  | 2000 | C      | -5                   | -3   |      |      |      |
| 360 | VALLE DEL VENTO              | IT0919  | 1981  | 2005 | C      |                      |      | -29  | 10   | 2    |
| 361 | VALTOURNANCHE                | IT0289  | 1927  | 2005 | C      | -6                   | -5   | -5   |      | -2   |
| 362 | VAUDALETTA                   | IT0142  | 1973  | 1999 | C      | -1                   | -19  | 0    |      | 0    |
| 363 | VENEROCOLO                   | IT0581  | 1920  | 2005 | C      | -16                  | -16  | -12  | -10  | -14  |
| 364 | VENTINA                      | IT0416  | 1907  | 2005 | C      | -16                  | -12  | -6   | -14  | -17  |
| 365 | VERRA (GRANDE DI)            | IT0297  | 1914  | 2001 | C      |                      |      | -12  | -9   | -19  |
| 366 | ZAI DI DENTRO / ZAY F. INN.  | IT0749  | 1930  | 2005 | C      | -4                   | -8   |      |      |      |
| 367 | ZAI DI FUORI / ZAY F. AEUSS. | IT0751  | 1899  | 2005 | C      | -3                   | -3   |      |      |      |
| 368 | ZAI DI MEZZO / ZAY F. MITT.  | IT0750  | 1934  | 2005 | C      | -17                  | -12  |      |      |      |

#### KENYA

|     |       |        |      |      |   |  |  |  |  |     |
|-----|-------|--------|------|------|---|--|--|--|--|-----|
| 369 | LEWIS | KE0008 | 1899 | 2004 | E |  |  |  |  | -79 |
|-----|-------|--------|------|------|---|--|--|--|--|-----|

#### NEPAL

|     |                      |        |      |      |   |  |  |  |      |  |
|-----|----------------------|--------|------|------|---|--|--|--|------|--|
| 370 | LHOTSE SHAR / IMJA   | NP     | 1992 | 1992 | C |  |  |  | -730 |  |
| 371 | ROLWALING (TRAKARD.) | NP     | 1993 | 1993 | C |  |  |  | -250 |  |
| 372 | THULAGI              | NP0013 | 1972 | 1996 | C |  |  |  | -506 |  |

#### NEW ZEALAND

|     |                 |    |      |      |   |    |     |    |    |    |
|-----|-----------------|----|------|------|---|----|-----|----|----|----|
| 373 | ADAMS           | NZ | 1892 | 2003 | A |    |     | ST |    |    |
| 374 | ALMER/SALISBURY | NZ | 1993 | 2005 | A | ST |     |    | -X | ST |
| 375 | ANDY            | NZ | 1993 | 2005 | A |    |     | -X | -X | -X |
| 376 | ASHBURTON       | NZ | 1993 | 2005 | A |    |     | ST | ST | -X |
| 377 | AXIUS           | NZ | 1998 | 2002 | — |    |     | -X |    | ST |
| 378 | BALFOUR         | NZ | 1995 | 2005 | A |    |     | -X | ST | ST |
| 379 | BARLOW          | NZ | 1992 | 2000 | A |    |     | +X | -  | -X |
| 380 | BARRIER         | NZ | 1998 | 1999 | A |    |     | -X | -X |    |
| 381 | BARRIER PK      | NZ | 1993 | 1995 | — |    |     |    |    | -X |
| 382 | BONAR           | NZ | 1995 | 2000 | A |    |     | +X | -X | -X |
| 383 | BREWSTER        | NZ | 1992 | 2005 | C | -8 | -12 | -8 | 0  | -7 |
| 384 | BURTON          | NZ | 1993 | 2000 | — |    |     |    |    | ST |
| 385 | BUTLER          | NZ | 1992 | 2005 | A |    |     | ST | ST | ST |
| 386 | CAMERON         | NZ | 1993 | 2005 | A |    |     | +X |    |    |
| 387 | COLIN CAMPBELL  | NZ | 1995 | 2001 | — |    |     | -X |    |    |
| 388 | CROW            | NZ | 1995 | 2005 | A |    |     | +X | ST | -X |
| 389 | DAINTY          | NZ | 1996 | 2000 | A |    |     | +X | ST | -X |
| 390 | DART            | NZ | 1981 | 2005 | A |    |     | -X | -X | -X |
| 391 | DISPUTE         | NZ | 1998 | 2002 | A |    |     | -X |    | -X |



| NR            | GLACIER NAME          | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|---------------|-----------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|               |                       |         |       |      |        | 2006                 | 2007 | 2008 | 2009 | 2010 |
| 392           | DONALD                | NZ      | 2000  | 2000 | —      |                      |      | ST   |      | ST   |
| 393           | DONNE                 | NZ      | 1995  | 2003 | A      |                      |      |      | -X   |      |
| 394           | DOUGLAS (KAR.)        | NZ      | 1993  | 2005 | A      |                      |      | -X   | -X   | ST   |
| 395           | FITZGERALD (GOD)      | NZ      | 2000  | 2001 | —      |                      |      |      |      | -X   |
| 396           | FORGOTTEN COL         | NZ      | 1998  | 1999 | A      |                      |      | +X   | +X   |      |
| 397           | FOX                   | NZ      | 1934  | 2005 | C      | 87                   | 0    | 0    | -10  |      |
| 398           | FRANZ JOSEF           | NZ      | 1894  | 2005 | C      |                      |      | 30   | -10  | -22  |
| 399           | FRESHFIELD            | NZ      | 1996  | 2002 | A      |                      |      |      | +X   | -X   |
| 400           | GLENMARY              | NZ      | 1994  | 2000 | A      |                      |      | -X   | -X   | -X   |
| 401           | GUNN                  | NZ      | 1993  | 2005 | A      |                      |      | -X   | -X   |      |
| 402           | HORACE WALKER         | NZ      | 1995  | 2005 | A      |                      |      | +X   | ST   | +X   |
| 403           | IVORY                 | NZ      | 1981  | 2005 | A      |                      |      | +X   | +X   | ST   |
| 404           | KAHUTEA               | NZ      | 1995  | 2004 | A      |                      |      |      | -X   | ST   |
| 405           | LA PEROUSE            | NZ      | 1995  | 2005 | A      |                      |      | ST   | ST   | ST   |
| 406           | LAMBERT               | NZ      | 1992  | 2005 | A      |                      |      | ST   |      | -X   |
| 407           | LYELL                 | NZ      | 1995  | 2004 | A      |                      |      | -X   |      | -X   |
| 408           | MACAULAY              | NZ      | 2000  | 2000 | —      |                      |      |      |      | +X   |
| 409           | MARION                | NZ      | 1993  | 2005 | A      |                      |      | ST   | +X   | -X   |
| 410           | MARMADUKE DIXON       | NZ      | 1993  | 2005 | A      |                      |      |      | -X   | -X   |
| 411           | MATHAIAS              | NZ      | 2000  | 2003 | —      |                      |      |      |      | ST   |
| 412           | MC COY                | NZ      | 1995  | 2000 | A      |                      |      | ST   |      |      |
| 413           | METALILLE             | NZ      | 2009  |      | A      |                      |      |      | -X   | -X   |
| 414           | MUELLER               | NZ      | 1991  | 2005 | A      |                      |      | -    | -    | -X   |
| 415           | MURCHISON             | NZ      | 1993  | 2005 | A      |                      |      | -    | -    |      |
| 416           | PARK PASS             | NZ      | 1994  | 2005 | A      |                      |      | -    | -    | -X   |
| 417           | REISCHEK              | NZ      | 1995  | 2005 | A      |                      |      | -X   |      |      |
| 418           | RICHARDSON            | NZ      | 1993  | 2000 | A      |                      |      | +X   |      | -X   |
| 419           | ROLLESTON             | NZ      | 1981  | 2005 | D      |                      | SN   |      |      | 4    |
| 420           | SEPARATION            | NZ      | 1996  | 2000 | —      |                      |      |      |      | +X   |
| 421           | SIEGE                 | NZ      | 1992  | 2005 | A      |                      |      | -X   | -X   | -X   |
| 422           | SLADDEN               | NZ      | 2009  |      | A      |                      |      |      | ST   | ST   |
| 423           | SNOW WHITE            | NZ      | 1993  | 2005 | A      |                      |      | -X   | -X   | -X   |
| 424           | SNOWBALL              | NZ      | 1993  | 2003 | A      |                      |      | ST   | +X   | ST   |
| 425           | SOUTH CAMERON         | NZ      | 2004  | 2004 | A      |                      |      | -X   | ST   | -X   |
| 426           | SPENCER               | NZ      | 1992  | 2000 | A      |                      |      | -X   | +X   | -X   |
| 427           | ST. JAMES             | NZ      | 1996  | 2003 | —      |                      |      |      |      | +X   |
| 428           | STOCKING (TEWAEWAE)   | NZ      | 1875  | 2001 | A      |                      |      |      | +X   | -X   |
| 429           | STRAUCHON             | NZ      | 1994  | 2005 | —      |                      |      |      |      | +X   |
| 430           | TASMAN                | NZ      | 1991  | 2005 | A      | -X                   |      |      | -X   | -X   |
| 431           | THURNEYSON            | NZ      | 1992  | 2005 | A      |                      |      | -X   | -X   | -X   |
| 432           | VICTORIA              | NZ      | 1995  | 2005 | A      | +X                   |      |      | +X   | ST   |
| 433           | WHATAROA              | NZ      | 1999  | 2005 | —      |                      |      | -X   |      | -X   |
| 434           | WHITBOURNE            | NZ      | 1995  | 2001 | —      |                      |      |      |      | ST   |
| 435           | WHITE                 | NZ      | 1993  | 2005 | —      |                      |      |      |      | ST   |
| 436           | WHYMPER               | NZ      | 1995  | 2005 | A      |                      |      | -X   |      | -X   |
| 437           | WILKINSON             | NZ      | 1995  | 2005 | A      |                      |      |      | ST   |      |
| 438           | ZORA                  | NZ      | 1995  | 2005 | A      |                      |      | +X   | +X   | +X   |
| <u>NORWAY</u> |                       |         |       |      |        |                      |      |      |      |      |
| 439           | ALDEGONDABREEN        | NO14108 | 1936  | 2004 | D      | -100                 |      |      |      |      |
| 440           | AUSTERDALSMBREEN      | NO31220 | 1906  | 2005 | C      | -21                  | -20  | -20  | -5   | -12  |
| 441           | AUSTRE OKSTINDBREEN   | NO      | 1909  | 1944 | C      |                      | 1    | 2    |      | -32  |
| 442           | BERGSETBREEN          | NO31013 | 1903  | 2005 | C      | -122                 |      |      |      |      |
| 443           | BLOMSTOELSKARDSMBREEN | NO      | 1998  | 2005 | C      | -2                   | 2    | 0    |      | -8   |
| 444           | BOEDALSMBREEN         | NO37219 | 1907  | 2005 | C      | -72                  | -13  | -22  | -52  | -65  |
| 445           | BOEVERBREEN           | NO0548  | 1904  | 2005 | C      | -9                   | -2   | -2   | -6   | -12  |
| 446           | BOEYABREEN            | NO33014 | 1903  | 2005 | C      | -37                  | -74  | 32   | -29  | -32  |
| 447           | BONDHUSBREA           | NO20408 | 1903  | 2005 | C      | -48                  | -49  | -50  | -10  | -28  |
| 448           | BOTNABREA             | NO20515 | 1998  | 2005 | C      | -24                  |      | -9   | -1   | -10  |
| 449           | BREIDABLIKKBREA       | NO      | 2003  | 2005 | C      | -2                   |      |      |      |      |
| 450           | BRENNDALSBREEN        | NO37109 | 1901  | 2005 | C      | -160                 | -87  | -56  | -29  | -22  |

| NR              | GLACIER NAME         | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|-----------------|----------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|                 |                      |         |       |      |        | 2006                 | 2007 | 2008 | 2009 | 2010 |
| 451             | BRIKSDALSBREEN       | NO37110 | 1872  | 2005 | C      | -145                 | -30  | -12  | -22  | 8    |
| 452             | BUERBREEN            | NO21307 | 1904  | 2005 | C      | -9                   | -79  | 3    | -5   | -28  |
| 453             | CORNELIUSSEN BREEN   | NO      | 2007  |      | C      |                      | -44  | -46  |      | 7    |
| 454             | ENGABREEN            | NO67011 | 1750  | 2005 | C      | -5                   | -34  | -29  | -8   | -11  |
| 455             | FAABERGSTOELSBREEN   | NO31015 | 1903  | 2005 | C      | -46                  | -14  | -60  | -59  | -10  |
| 456             | GRAAFJELLSBREA       | NO      | 2003  | 2005 | C      | -97                  | -53  | -19  | -19  |      |
| 457             | HANSBREEN            | NO12419 | 1918  | 2004 | E      |                      | -90  |      | -35  | 50   |
| 458             | HELLSTUGUBREEN       | NO0511  | 1902  | 2005 | C      | -15                  | -10  | 0    | -10  | -5   |
| 459             | IRENEBREEN           | NO15402 | 1995  | 2005 | C      |                      |      | -12  | -10  | -124 |
| 460             | KJENN DALSBREEN      | NO37223 | 1907  | 2005 | C      | -161                 | -182 | -4   | -93  |      |
| 461             | KOPPANGSBREEN        | NO      | 1999  | 2005 | C      | -38                  | -12  | -4   | -20  | -18  |
| 462             | LANGFJORDJOEKULEN    | NO85008 | 1945  | 2005 | C      | -35                  | -51  | -12  | -53  | -15  |
| 463             | LEIRBREEN            | NO0548  | 1908  | 2005 | C      | -16                  | 6    | 33   |      | -50  |
| 464             | MIDTDALSBREEN        | NO4302  | 1983  | 2005 | C      | -10                  | -31  | -31  | 6    | -34  |
| 465             | NIGARDSBREEN         | NO31014 | 1903  | 2005 | C      | -32                  | -4   | -1   | -24  | -39  |
| 466             | REMBESDALSKA AKA     | NO22303 | 1918  | 2005 | C      | -34                  | -22  | -35  | -10  | -14  |
| 467             | STEGHOLT BREEN       | NO31021 | 1907  | 2005 | C      | 5                    | -39  | -30  | 1    | -6   |
| 468             | STEINDALSBREEN       | NO      | 1999  | 2005 | C      | -34                  | -30  | -24  | -10  | -40  |
| 469             | STORBREEN            | NO0541  | 1888  | 2004 | C      | -16                  | -1   | -7   | -5   | -14  |
| 470             | STORE SUPHELLEBREEN  | NO33014 | 1901  | 2005 | C      | -8                   | -20  | 9    | 5    | 16   |
| 471             | STORJUVBREEN         | NO      | 1902  | 2005 | C      | -8                   | -3   | -4   | -8   | -18  |
| 472             | STORSTEINSFJELLBREEN | NO7381  | 2007  |      | C      |                      | -3   | -9   |      | -22  |
| 473             | STYGGEDALSBREEN      | NO30720 | 1902  | 2005 | C      | -8                   | -19  | 9    |      | -27  |
| 474             | SVELGJABREEN         | NO      | 2008  |      | C      |                      |      | -1   | 1    | 1    |
| 475             | SYDBREEN             | NO      | 2008  |      | C      |                      |      | -14  | -10  | -14  |
| 476             | TAVLEBREEN           | NO      | 1960  | 2003 | D      | -150                 |      |      |      |      |
| 477             | TROLLKYRKJEBREEN     | NO      | 1945  | 1974 | C      |                      |      |      |      | -16  |
| 478             | TUFTEBREEN           | NO      | 2008  |      | C      |                      |      | -12  | -12  | -15  |
| 479             | WALDEMARBREEN        | NO15403 | 1936  | 2005 | C      | -8                   | -12  | -13  | -10  | -106 |
| <u>PAKISTAN</u> |                      |         |       |      |        |                      |      |      |      |      |
| 480             | BATURA               | PK0005  | 2010  |      | —      |                      |      |      |      | -750 |
| 481             | GHULKIN              | PK0008  | 2008  |      | —      |                      |      | 120  |      |      |
| 482             | RAIKOT               | PK      | 1954  | 2003 | E      | -15                  | 4    |      |      |      |
| <u>PERU</u>     |                      |         |       |      |        |                      |      |      |      |      |
| 483             | ALPAMAYO             | PE      | 2006  |      | —      |                      | -13  | -11  | -10  |      |
| 484             | ARTESONRAJU          | PE0003  | 1948  | 2005 | C      |                      | -12  |      | -11  | 0    |
| 485             | GAJAP-YANACARCO      | PE0009  | 1981  | 2005 | —      | -17                  | -20  | -29  | -8   |      |
| 486             | INCACHIRIASCA        | PE      | 2008  |      | —      |                      |      | -10  | -10  |      |
| 487             | PASTORURI            | PE0008  | 1981  | 2005 | —      | -12                  | -11  | -12  | -8   |      |
| 488             | SHALLAP              | PE0003  | 2005  | 2005 | —      |                      |      | -11  |      |      |
| 489             | URUASHRAJU           | PE0005  | 1968  | 2005 | —      | -20                  | -29  | -18  | -9   |      |
| 490             | YANAMAREY            | PE0004  | 1972  | 2005 | —      | -18                  | -19  | -40  | -7   | -37  |
| <u>POLAND</u>   |                      |         |       |      |        |                      |      |      |      |      |
| 491             | POD BULA             | PL0111  | 1981  | 2005 | ES     | 3                    | -32  | 19   | 11   | -4   |
| 492             | POD CUBRYNA          | PL0180  | 1981  | 2005 | C      | 1                    |      |      |      | +X   |
| <u>SPAIN</u>    |                      |         |       |      |        |                      |      |      |      |      |
| 493             | ANETO                | ES9030  | 1946  | 2005 | E      |                      |      | -20  |      |      |
| 494             | MALADETA             | ES9020  | 1957  | 2005 | C      | -1                   | -8   | 0    | 0    | 0    |
| <u>SWEDEN</u>   |                      |         |       |      |        |                      |      |      |      |      |
| 495             | ISFALLSGLAC.         | SE0787  | 1910  | 2005 | C      | -5                   |      |      |      |      |
| 496             | KARSOJETNA           | SE0798  | 1909  | 2003 | C      |                      | -33  | -5   |      |      |
| 497             | MIKKAJEKNA           | SE0766  | 1899  | 2002 | C      |                      |      | -140 |      | -50  |
| 498             | PARTEJEKNA           | SE0763  | 1970  | 2003 | C      |                      |      | -121 |      |      |
| 499             | PASSUSJETNA E.       | SE0797  | 1969  | 2000 | C      | -53                  |      |      |      | -31  |
| 500             | RABOTS GLACIAER      | SE0785  | 1933  | 2003 | C      |                      | -63  |      |      |      |
| 501             | RIUKOJETNA           | SE0790  | 1968  | 2002 | C      | -18                  |      |      |      |      |

| NR                 | GLACIER NAME     | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|--------------------|------------------|---------|-------|------|--------|----------------------|------|------|------|------|
|                    |                  |         |       |      |        | SURVEY               | 2006 | 2007 | 2008 | 2009 |
| 502                | RUOPSOKJEKNA     | SE0764  | 1967  | 2000 | C      |                      |      | -101 |      |      |
| 503                | RUOTESJEKNA      | SE0767  | 1967  | 2002 | C      |                      |      | -97  |      |      |
| 504                | SALAJEKNA        | SE0759  | 1908  | 2002 | C      |                      |      | -100 |      |      |
| 505                | SE KASKASATJ GL  | SE0789  | 1951  | 2005 | C      |                      |      |      | 10   |      |
| 506                | STORGLACIAEREN   | SE0788  | 1908  | 2005 | D      | -14                  | SN   | SN   | SN   | -6   |
| 507                | SUOTTASJEKNA     | SE0768  | 1901  | 2002 | C      |                      |      | -63  |      |      |
| 508                | VARTASJEKNA      | SE0765  | 1968  | 2003 | D      |                      |      |      | SN   | -12  |
| <u>SWITZERLAND</u> |                  |         |       |      |        |                      |      |      |      |      |
| 509                | ALBIGNA          | CH0116  | 1882  | 1991 | C      |                      |      |      |      | -28  |
| 510                | ALLALIN          | CH0011  | 1884  | 2005 | A      | 1                    | -14  | 14   | -4   | -1   |
| 511                | ALPETLI(KANDER)  | CH0109  | 1894  | 2005 | C      | -23                  | -25  | -45  | -28  | -25  |
| 512                | AMMERTEN         | CH0111  | 1970  | 2005 | C      | -3                   | -1   | -2   | 0    | -1   |
| 513                | AROLLA (BAS)     | CH0027  | 1886  | 2005 | C      | -35                  | -25  |      | -68  | -25  |
| 514                | BASODINO         | CH0104  | 1894  | 2005 | C      | -11                  | -30  | -12  | -3   | -7   |
| 515                | BIFERTEN         | CH0077  | 1884  | 2005 | C      | -6                   | -11  | -9   | -4   | -11  |
| 516                | BLUEMLISALP      | CH0064  | 1894  | 2005 | C      | -35                  | -31  | -34  | -19  | -15  |
| 517                | BOVEYRE          | CH0041  | 1890  | 2005 | C      | -23                  | -20  | -15  | -22  | -19  |
| 518                | BRENEY           | CH0036  | 1882  | 2005 | C      | -26                  | -36  | -23  | -32  | -35  |
| 519                | BRESCIANA        | CH0103  | 1898  | 2005 | C      | -14                  | -26  | -7   | -3   | -6   |
| 520                | BRUNEGG          | CH0020  | 1941  | 2005 | C      |                      |      |      |      | -99  |
| 521                | BRUNNI           | CH0072  | 1883  | 2003 | C      |                      |      |      | -5   |      |
| 522                | CALDERAS         | CH0095  | 1921  | 2005 | C      | -12                  | -20  | -7   | -121 | -13  |
| 523                | CAMBRENA         | CH0099  | 1889  | 2005 | C      | -20                  | -33  | -20  |      |      |
| 524                | CAVAGNOLI        | CH0119  | 1894  | 2005 | C      | -17                  | -17  | -21  | -5   | -9   |
| 525                | CHEILLON         | CH0029  | 1925  | 2005 | C      | 2                    | -7   | -3   |      | -2   |
| 526                | CORBASSIERE      | CH0038  | 1890  | 2005 | A      | -36                  | -18  | -21  | -101 | -40  |
| 527                | CORNO            | CH0120  | 1895  | 2005 | C      | -5                   | -8   | -3   | -1   | -7   |
| 528                | CROSLINA         | CH0121  | 1990  | 2005 | C      | -10                  | -3   | -3   | -1   | -1   |
| 529                | DUNGEL           | CH0112  | 1894  | 2005 | C      | -2                   | -5   | -3   | -3   | -2   |
| 530                | EIGER            | CH0059  | 1883  | 2005 | C      | -21                  |      | -225 |      | -8   |
| 531                | EN DARREY        | CH0030  | 1929  | 2005 | C      | -6                   | -1   | -8   |      | -33  |
| 532                | FEE NORTH        | CH0013  | 1884  | 2005 | C      | -4                   | -5   | -20  | -14  | -6   |
| 533                | FERPECLE         | CH0025  | 1892  | 2005 | C      | -33                  | -16  |      | -13  | -23  |
| 534                | FIESCHER         | CH0004  | 1892  | 2001 | C      | -13                  | -49  | -33  | -11  | -25  |
| 535                | FINDELEN         | CH0016  | 1886  | 2005 | A      | -2                   | -12  | -1   | -1   | 0    |
| 536                | FIRNALPELI       | CH0075  | 1895  | 2005 | C      | -33                  | -19  | 4    | -7   | -23  |
| 537                | FORNO            | CH0102  | 1864  | 2005 | D      | -24                  | -31  | -28  | -24  | -28  |
| 538                | GAMCHI           | CH0061  | 1884  | 2005 | C      | -12                  | -18  | -7   | -8   | -16  |
| 539                | GAULI            | CH0052  | 1886  | 2005 | C      | -78                  | -100 | -75  | -100 | -196 |
| 540                | GELTEN           | CH0113  | 2003  | 2003 | C      | -5                   | -14  | -8   | -16  |      |
| 541                | GIETRO           | CH0037  | 1890  | 2005 | A      | -31                  | -21  | -22  | -48  | -33  |
| 542                | GLAERNISCH       | CH0080  | 1926  | 2005 | C      | -8                   | -14  | -3   | -13  | -9   |
| 543                | GORNER           | CH0014  | 1883  | 2005 | C      | -4                   | -17  | -290 | -6   | -11  |
| 544                | GRAND DESERT     | CH0031  | 1893  | 2005 | C      | -6                   | -41  | -47  | -16  | -16  |
| 545                | GRAND PLAN NEVE  | CH0045  | 1894  | 2005 | C      | -8                   | -3   | -1   | -3   | -8   |
| 546                | GRIES            | CH0003  | 1880  | 2005 | A      | -50                  | -39  | -26  | -16  | -24  |
| 547                | GRIESS(KLAUSEN)  | CH0074  | 1930  | 2005 | C      | -11                  | -6   | -4   | -3   | -2   |
| 548                | GRIESSEN(OBWA.)  | CH0076  | 1895  | 2005 | C      | -1                   | -8   |      | -11  | -4   |
| 549                | GROSSER ALETSCHE | CH0005  | 1881  | 2005 | A      | -115                 | -32  | -68  | -33  | -21  |
| 550                | HOHLAUB          | CH      | 2006  | 2006 | A      | -194                 | -12  | -5   | -4   | -4   |
| 551                | HUEFI            | CH0073  | 1883  | 2005 | C      | -64                  | -4   | -12  | -9   | 0    |
| 552                | KALTWASSER       | CH0007  | 1892  | 2005 | C      | -30                  | -22  | 7    | -6   | 5    |
| 553                | KEHLEN           | CH0068  | 1894  | 2005 | C      | -18                  | -27  | -37  | -24  | -31  |
| 554                | KESSJEN          | CH0012  | 1931  | 2005 | A      | -17                  | -3   | -12  | -7   | -5   |
| 555                | LAEMMERN         | CH0063  | 1919  | 2005 | C      | -9                   | -41  | -15  | -12  | -12  |
| 556                | LANG             | CH0018  | 1889  | 2005 | C      | -17                  | -19  | -19  | -13  | -28  |
| 557                | LAVAZ            | CH0082  | 1886  | 2005 | C      |                      |      | -18  |      | -14  |
| 558                | LENTA            | CH0084  | 1897  | 2005 | C      | -29                  | -36  | -10  | -13  | -15  |
| 559                | LIMMERN          | CH0078  | 1886  | 2005 | C      | -2                   | -10  | -6   | -4   | -2   |
| 560                | LISCHANA         | CH0098  | 1897  | 2005 | C      | -5                   |      | -7   | -3   | -12  |

| NR            | GLACIER NAME    | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |       |      |      |      |      |
|---------------|-----------------|---------|-------|------|--------|----------------------|-------|------|------|------|------|
|               |                 |         |       |      |        | SURVEY               | 2006  | 2007 | 2008 | 2009 | 2010 |
| 561           | MOIRY           | CH0024  | 1892  | 2005 | C      | -9                   | -18   | -16  |      | -33  |      |
| 562           | MOMING          | CH0023  | 1880  | 2001 | C      |                      |       |      |      | -11  |      |
| 563           | MONT DURAND     | CH0035  | 1891  | 2005 | C      | -20                  | -17   |      | -53  | -24  |      |
| 564           | MONT FORT       | CH0032  | 1893  | 2005 | C      | -30                  | -3    |      | -22  | -7   |      |
| 565           | MONT MINE       | CH0026  | 1957  | 2005 | C      | -23                  | -10   |      | -32  | -21  |      |
| 566           | MORTERATSCH     | CH0094  | 1880  | 2005 | C      | -33                  | -19   | -35  | -33  | -51  |      |
| 567           | MUTT            | CH0002  | 1919  | 2005 | C      | -30                  | -9    | -18  | -22  |      |      |
| 568           | OBERALETSCHE    | CH0006  | 1881  | 2005 | C      |                      | -6    |      |      |      |      |
| 569           | OTEMMA          | CH0034  | 1882  | 2005 | C      | -100                 | -61   | -31  | -51  | -37  |      |
| 570           | PALUE           | CH0100  | 1895  | 2004 | C      | -37                  | -27   | -8   |      | 0    |      |
| 571           | PANEYROSSE      | CH0044  | 1887  | 2004 | C      | -4                   | -2    | -2   | -5   | -9   |      |
| 572           | PARADIES        | CH0086  | 1898  | 2005 | C      | -35                  | -6    | 2    | 2    | 0    |      |
| 573           | PARADISINO      | CH0101  | 1956  | 2005 | C      | -38                  | -2    | -11  |      | -40  |      |
| 574           | PIZOL           | CH0081  | 1894  | 2005 | C      | -9                   | -7    | 0    | -2   | -3   |      |
| 575           | PLATTALVA       | CH0114  | 1970  | 2005 | C      | -17                  | -14   | -20  | -21  | -19  |      |
| 576           | PORCHABELLA     | CH0088  | 1894  | 2005 | C      | -17                  | -27   | -22  | -17  | -16  |      |
| 577           | PRAPIO          | CH0048  | 1899  | 2005 | C      |                      | -5    | -4   | -6   | -9   |      |
| 578           | PUNTEGLIAS      | CH0083  | 1897  | 2005 | C      | -3                   | -7    | -10  |      | -13  |      |
| 579           | RHONE           | CH0001  | 1880  | 2005 | A      | -8                   | -12   | -3   | -4   | -3   |      |
| 580           | RIED            | CH0017  | 1896  | 2005 | C      | -17                  | -9    | -19  | -500 |      |      |
| 581           | ROSEG           | CH0092  | 1881  | 2005 | C      | -27                  | -27   | -18  | -32  | 0    |      |
| 582           | ROTFIRN NORD    | CH0069  | 1957  | 2005 | C      | -17                  | -14   | -13  | -12  | -24  |      |
| 583           | SALEINA         | CH0042  | 1880  | 2005 | C      | -15                  | -24   | -22  | -16  | -26  |      |
| 584           | SANKT ANNA      | CH0067  | 1882  | 2004 | C      | -27                  |       | -20  | -6   | -13  |      |
| 585           | SARDONA         | CH0091  | 1897  | 2005 | C      | -22                  | -37   | -8   | -2   | 2    |      |
| 586           | SCALETTA        | CH0115  | 1999  | 2005 | C      | -7                   | -20   | -22  | -6   | -4   |      |
| 587           | SCHWARZBERG     | CH0010  | 1909  | 2005 | A      | -11                  | -11   | -13  | -17  | -10  |      |
| 588           | SEEWJINEN       | CH      | 2006  |      | A      | -12                  | -4    | -23  | -2   | -8   |      |
| 589           | SESVENNA        | CH0097  | 1957  | 2004 | C      | -21                  | -10   | -8   | -5   | -8   |      |
| 590           | SEX ROUGE       | CH0047  | 1899  | 2005 | C      | -2                   | -1    |      | -4   |      |      |
| 591           | SILVRETTA       | CH0090  | 1957  | 2005 | A      | -7                   | -10   | -6   | -7   | -8   |      |
| 592           | STEIN           | CH0053  | 1894  | 2005 | C      | -45                  | -14   | -20  | -28  | -122 |      |
| 593           | STEINLIMMI      | CH0054  | 1962  | 2005 | C      | -27                  | -14   | -23  | -19  | -51  |      |
| 594           | SULZ            | CH0079  | 1913  | 2005 | C      | -2                   | -7    | -4   | -8   | -2   |      |
| 595           | SURETTA         | CH0087  | 1931  | 2005 | C      | -725                 | -20   | -2   | 0    | 1    |      |
| 596           | TIATSCHA        | CH0096  | 1894  | 2003 | C      | -250                 | -12   | -5   | 1    | -7   |      |
| 597           | TIEFEN          | CH0066  | 1923  | 2005 | C      | -14                  | -19   | -32  | -16  | -16  |      |
| 598           | TRIENT          | CH0043  | 1880  | 2005 | C      | -5                   | -18   | -91  | -151 | 14   |      |
| 599           | TRIFT (GADMEN)  | CH0055  | 1892  | 2005 | A      | -67                  | -71   | -22  | -34  | -24  |      |
| 600           | TSANFLEURON     | CH0033  | 1885  | 2005 | C      |                      |       | -126 | -104 |      |      |
| 601           | TSCHIERVA       | CH0093  | 1943  | 2005 | C      | -55                  | -51   | -25  | -25  | -21  |      |
| 602           | TSCHINGEL       | CH0060  | 1894  | 2005 | C      | -7                   | -14   | -1   | -3   | -16  |      |
| 603           | TSEUDET         | CH0040  | 1891  | 2005 | C      |                      | 7     | 11   | -11  | -8   |      |
| 604           | TSIDJORE NOUVE  | CH0028  | 1882  | 2005 | C      | -40                  | -18   |      | -26  | -15  |      |
| 605           | VAL TORTA       | CH0118  | 1971  | 2005 | C      | -14                  | -4    | -12  | 0    |      |      |
| 606           | VALLEGGIA       | CH0117  | 1973  | 2005 | C      | -5                   | -6    | -9   | -1   | -8   |      |
| 607           | VALSOREY        | CH0039  | 1890  | 2005 | C      |                      | -51   | -6   | -28  | -21  |      |
| 608           | VERSTANKLA      | CH0089  | 1927  | 2005 | C      | -21                  | -21   | -9   | -10  | -10  |      |
| 609           | VORAB           | CH0085  | 1886  | 2005 | C      | -12                  | -24   | -9   | -14  | -9   |      |
| 610           | WALLENBUR       | CH0071  | 1894  | 2005 | C      | -2                   | -5    | -2   | -9   | -12  |      |
| 611           | ZINAL           | CH0022  | 1892  | 2005 | C      | -7                   | -15   |      | -34  | -9   |      |
| <u>TURKEY</u> |                 |         |       |      |        |                      |       |      |      |      |      |
| 612           | ERCIYES         | TR      | 1930  | 2001 | D      |                      |       | -40  |      |      |      |
| <u>U.S.A.</u> |                 |         |       |      |        |                      |       |      |      |      |      |
| 613           | BEAR            | US      | 1888  | 2004 | D      | -31                  | -45   |      |      |      |      |
| 614           | BOULDER         | US2005  | 1965  | 2003 | A      | -80                  |       |      |      |      |      |
| 615           | COLEMAN         | US2011  | 1953  | 1968 | A      | -X                   |       |      |      |      |      |
| 616           | COLUMBIA (2057) | US2057  | 1986  | 2005 | D      | -15                  | -6    | SN   | -8   | -12  |      |
| 617           | COLUMBIA (627)  | US0627  | 1899  | 2000 | -      |                      | -2000 |      |      |      |      |

| NR  | GLACIER NAME  | PSFG NR | FIRST | LAST | METHOD | VARIATIONS IN METERS |      |      |      |      |
|-----|---------------|---------|-------|------|--------|----------------------|------|------|------|------|
|     |               |         |       |      |        | SURVEY               | 2006 | 2007 | 2008 | 2009 |
| 618 | DANIELS       | US2052  | 1986  | 2005 | D      | -14                  | SN   | SN   | -50  | -15  |
| 619 | DEMING        | US2009  | 1965  | 2005 | C      | -36                  |      |      |      |      |
| 620 | DINGLESTADT   | US      | 1878  | 2000 | D      | -145                 |      |      |      |      |
| 621 | EASTON        | US2008  | 1970  | 2005 | D      | -30                  | -20  | -8   | -15  | -17  |
| 622 | EXCELSIOR     | US      | 1917  | 1994 | D      | -2010                |      |      |      |      |
| 623 | EXIT          | US0390  | 1899  | 2004 | D      | -71                  |      |      |      |      |
| 624 | FOSS          | US2053  | 2005  | 2005 | D      | -16                  | SN   | SN   | -80  |      |
| 625 | GREWINGK      | US      | 1904  | 1994 | D      | -475                 |      |      |      |      |
| 626 | ICE WORM      | US2054  | 2005  | 2005 | D      | -12                  | SN   | SN   | -20  |      |
| 627 | LOWER CURTIS  | US2055  | 1986  | 2005 | D      | -14                  | -13  | -17  | -10  | -7   |
| 628 | LYMAN         | US      | 2007  |      | C      |                      | -12  |      |      |      |
| 629 | LYNCH         | US2056  | 2005  | 2005 | D      | -6                   | SN   | -6   | -4   |      |
| 630 | MCCARTY       | US      | 1909  | 2004 | D      | -32                  | -45  |      |      |      |
| 631 | NORTHWESTERN  | US      | 1928  | 2000 | D      | -24                  |      |      |      |      |
| 632 | NUKA          | US      | 1736  | 2000 | D      | -55                  |      |      |      |      |
| 633 | OKPILAK       | US      | 1907  | 1981 | D      | -520                 |      |      |      |      |
| 634 | RAINBOW       | US2003  | 1970  | 2005 | D      | -22                  | SN   | SN   | 0    |      |
| 635 | ROOSEVELT     | US2012  | 1965  | 1968 | A      | -X                   |      |      |      |      |
| 636 | SHOLES        | US      | 2006  |      | D      | -7                   | SN   | SN   | -6   |      |
| 637 | SOUTH CASCADE | US2013  | 1900  | 2005 | A      | -13                  | -9   |      |      |      |
| 638 | SQUAK         | US2007  | 1974  | 1974 | A      | -28                  |      |      |      |      |
| 639 | TAKU          | US1805  | 1968  | 1980 | B      |                      |      | -15  |      |      |
| 640 | TEBENKOF      | US0414A | 1880  | 2003 | D      | -216                 |      |      | -15  |      |
| 641 | VALDEZ        | US0629  | 1902  | 2004 | D      |                      |      | -250 |      |      |
| 642 | WOLVERINE     | US0411  | 1777  | 1994 | D      | -194                 |      |      |      |      |
| 643 | YALIK         | US      | 1909  | 2000 | D      | -239                 |      |      |      |      |
| 644 | YAWNING       | US2050  | 2005  | 2005 | A      | -7                   |      |      |      |      |









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| <p>WORLD GLACIER MONITORING SERVICE</p> <p><b>VARIATIONS IN THE POSITION<br/>OF GLACIER FRONTS</b></p> |
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TABLE BB

ADDENDA FROM EARLIER YEARS  
(INCLUDING RECONSTRUCTIONS)

|                        |  |
|------------------------|--|
| NR                     | Record number  |
| GLACIER NAME           | 15 alphabetic or numeric digits  |
| PSFG NUMBER            | 5 digits identifying glacier with alphabetic prefix<br>denoting country  |
| METHOD                 | A = aerial photogrammetry<br>B = terrestrial photogrammetry<br>C = geodetic ground survey<br>(theodolite, tape etc.)<br>D = combination of A, B or C<br>E = other direct methods or reconstructions such as based on<br>historical sources, geomorphological evidence, dating of<br>moraines |
| 1ST SURVEY             | Day, month and year of survey  |
| 2ND SURVEY             | Day, month and year of following survey  |
| VARIATION IN<br>METERS | Variation in the position of the glacier front in horizontal<br>projection expressed as the change in length between<br>the surveys  |
| Key to Symbols         | +X : Glacier in advance<br>-X : Glacier in retreat<br>ST : Glacier stationary<br>SN : Glacier front covered by snow  |

| NR               | GLACIER NAME          | PSFG NR | METHOD | 1ST SURVEY<br>D M Y | 2ND SURVEY<br>D M Y | VARIATIONS<br>IN METERS |
|------------------|-----------------------|---------|--------|---------------------|---------------------|-------------------------|
| <u>ARGENTINA</u> |                       |         |        |                     |                     |                         |
| 1                | AMEGHINO              | AR      | E      | 1765                | 1947                | -170                    |
|                  |                       |         | E      | 1947                | 1970                | -160                    |
|                  |                       |         | E      | 1970                | 1986                | -3600                   |
|                  |                       |         | E      | 1986                | 2000                | -500                    |
|                  |                       |         | E      | 2000                | 2005                | -390                    |
| 2                | ESPERANZA NORTE       | AR      | E      | 1652                | 1691                | -130                    |
|                  |                       |         | E      | 1691                | 1792                | -210                    |
|                  |                       |         | E      | 1792                | 1795                | 100                     |
|                  |                       |         | E      | 1795                | 1807                | -120                    |
|                  |                       |         | E      | 1807                | 1830                | 10                      |
|                  |                       |         | E      | 1830                | 1876                | -280                    |
|                  |                       |         | E      | 1876                | 1927                | -610                    |
|                  |                       |         | E      | 1927                | 1933                | -350                    |
|                  |                       |         | E      | 1933                | 1951                | -650                    |
|                  |                       |         | E      | 1951                | 1958                | -100                    |
|                  |                       |         | E      | 1958                | 1972                | -200                    |
|                  |                       |         | E      | 1972                | 1978                | 140                     |
|                  |                       |         | E      | 1978                | 1987                | -150                    |
|                  |                       |         | E      | 1987                | 1996                | -290                    |
|                  |                       |         | E      | 1996                | 2001                | -320                    |
| 3                | FRIAS                 | AR5004  | E      | 1639                | 1727                | -262                    |
|                  |                       |         | E      | 1727                | 1752                | -54                     |
|                  |                       |         | E      | 1752                | 1884                | -233                    |
|                  |                       |         | E      | 1884                | 1916                | -203                    |
|                  |                       |         | E      | 1916                | 1944                | -455                    |
|                  |                       |         | E      | 1944                | 1970                | -335                    |
|                  |                       |         | E      | 1970                | 1976                | 402                     |
|                  |                       |         | E      | 1976                | 1977                | 20                      |
|                  |                       |         | E      | 1977                | 1978                | -38                     |
|                  |                       |         | E      | 1978                | 1979                | -22                     |
|                  |                       |         | E      | 1979                | 1980                | -26                     |
|                  |                       |         | E      | 1980                | 1981                | -24                     |
|                  |                       |         | E      | 1981                | 1982                | -46                     |
|                  |                       |         | E      | 1982                | 1983                | -66                     |
|                  |                       |         | E      | 1983                | 1984                | -84                     |
|                  |                       |         | E      | 1984                | 1985                | -26                     |
|                  |                       |         | E      | 1985                | 1986                | -10                     |
|                  |                       |         | E      | 1986                | 1987                | -115                    |
|                  |                       |         | E      | 1987                | 2003                | -405                    |
| 4                | LAGO DEL DESIERTO I   | AR      | E      | 1740                | 1901                | -180                    |
|                  |                       |         | E      | 1901                | 1905                | -20                     |
|                  |                       |         | E      | 1905                | 1984                | -480                    |
|                  |                       |         | E      | 1984                | 2005                | -20                     |
| 5                | LAGO DEL DESIERTO II  | AR      | E      | 1645                | 1743                | -40                     |
|                  |                       |         | E      | 1743                | 1900                | -400                    |
|                  |                       |         | E      | 1900                | 1936                | -90                     |
|                  |                       |         | E      | 1936                | 1964                | -140                    |
|                  |                       |         | E      | 1964                | 1984                | -220                    |
| 6                | LAGO DEL DESIERTO III | AR      | E      | 1984                | 2005                | -70                     |
|                  |                       |         | E      | 1655                | 1734                | -80                     |
|                  |                       |         | E      | 1734                | 1867                | -300                    |
|                  |                       |         | E      | 1867                | 1920                | -50                     |
|                  |                       |         | E      | 1920                | 1945                | -450                    |
|                  |                       |         | E      | 1945                | 1984                | -230                    |
|                  |                       |         | E      | 1984                | 2005                | -30                     |

| NR | GLACIER NAME                      | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|-----------------------------------|---------|--------|------------|------------|------------|
|    |                                   |         |        | D M Y      | D M Y      | IN METERS  |
| 7  | NARVAEZ GRANDE                    | AR      | E      | 1896       | 1968       | -3350      |
|    |                                   |         | E      | 1968       | 1981       | -300       |
|    |                                   |         | E      | 1981       | 1984       | -150       |
|    |                                   |         | E      | 1984       | 2002       | -180       |
| 8  | PIEDRAS BLANCAS                   | AR      | E      | 1610       | 1744       | -130       |
|    |                                   |         | E      | 1744       | 1899       | -50        |
|    |                                   |         | E      | 1899       | 1931       | -520       |
|    |                                   |         | E      | 1931       | 1952       | -100       |
|    |                                   |         | E      | 1952       | 1968       | -140       |
|    |                                   |         | E      | 1968       | 1981       | 140        |
|    |                                   |         | E      | 1981       | 1984       | -10        |
| 9  | SAN LORENZO SUR                   | AR      | E      | 1984       | 2005       | -510       |
|    |                                   |         | E      | 1665       | 1769       | -240       |
|    |                                   |         | E      | 1769       | 1819       | -570       |
|    |                                   |         | E      | 1819       | 1958       | -1190      |
|    |                                   |         | E      | 1958       | 1969       | -90        |
|    |                                   |         | E      | 1969       | 1981       | -390       |
|    |                                   |         | E      | 1981       | 1984       | -40        |
|    |                                   |         | E      | 1984       | 2000       | -1000      |
|    |                                   |         | E      | 2000       | 2002       | -190       |
|    |                                   |         | E      | 2002       | 2004       | -160       |
| 10 | TORRE                             | AR      | E      | 1594       | 1727       | -210       |
|    |                                   |         | E      | 1727       | 1799       | -120       |
|    |                                   |         | E      | 1799       | 1866       | -40        |
|    |                                   |         | E      | 1866       | 1900       | -60        |
|    |                                   |         | E      | 1900       | 1931       | -1760      |
|    |                                   |         | E      | 1931       | 1968       | -50        |
|    |                                   |         | E      | 1968       | 1984       | 110        |
| 11 | <u>BOLIVIA</u><br>CHARQUINI NORTE | BO      | E      | 1984       | 2005       | -170       |
|    |                                   |         | E      | 1663       | 1706       | -47        |
|    |                                   |         | E      | 1706       | 1740       | -79        |
|    |                                   |         | E      | 1740       | 1755       | -130       |
|    |                                   |         | E      | 1755       | 1769       | -62        |
|    |                                   |         | E      | 1769       | 1794       | -31        |
|    |                                   |         | E      | 1794       | 1817       | -38        |
|    |                                   |         | E      | 1817       | 1847       | -18        |
|    |                                   |         | E      | 1847       | 1870       | -56        |
|    |                                   |         | E      | 1870       | 1910       | -344       |
|    |                                   |         | E      | 1910       | 1940       | -195       |
|    |                                   |         | E      | 1940       | 1956       | -250       |
|    |                                   |         | E      | 1956       | 1963       | -30        |
|    |                                   |         | E      | 1963       | 1974       | -35        |
|    |                                   |         | E      | 1974       | 1983       | -30        |
|    |                                   |         | E      | 1983       | 1997       | -70        |
| 12 | CHARQUINI OESTE                   | BO      | E      | 1663       | 1700       | -21        |
|    |                                   |         | E      | 1700       | 1739       | -119       |
|    |                                   |         | E      | 1739       | 1755       | -57        |
|    |                                   |         | E      | 1755       | 1763       | -49        |
|    |                                   |         | E      | 1763       | 1791       | -88        |
|    |                                   |         | E      | 1791       | 1815       | -201       |
|    |                                   |         | E      | 1815       | 1852       | -21        |
|    |                                   |         | E      | 1852       | 1873       | -59        |
|    |                                   |         | E      | 1873       | 1907       | -102       |
|    |                                   |         | E      | 1907       | 1940       | -79        |
|    |                                   |         | E      | 1940       | 1956       | -42        |
|    |                                   |         | E      | 1956       | 1963       | -17        |

| NR | GLACIER NAME      | PSFG NR | METHOD | 1ST SURVEY<br>D M Y | 2ND SURVEY<br>D M Y | VARIATIONS<br>IN METERS |
|----|-------------------|---------|--------|---------------------|---------------------|-------------------------|
|    |                   |         | E      | 1963                | 1974                | -45                     |
|    |                   |         | E      | 1974                | 1983                | -22                     |
|    |                   |         | E      | 1983                | 1997                | -28                     |
| 13 | CHARQUINI SUR     | BO      | E      | 1686                | 1703                | -65                     |
|    |                   |         | E      | 1703                | 1734                | -21                     |
|    |                   |         | E      | 1734                | 1765                | -63                     |
|    |                   |         | E      | 1765                | 1808                | -106                    |
|    |                   |         | E      | 1808                | 1825                | -79                     |
|    |                   |         | E      | 1825                | 1843                | -46                     |
|    |                   |         | E      | 1843                | 1871                | -110                    |
|    |                   |         | E      | 1871                | 1912                | -123                    |
|    |                   |         | E      | 1912                | 1940                | -26                     |
|    |                   |         | E      | 1940                | 1956                | -12                     |
|    |                   |         | E      | 1956                | 1963                | -43                     |
|    |                   |         | E      | 1963                | 1974                | -49                     |
|    |                   |         | E      | 1974                | 1983                | -80                     |
|    |                   |         | E      | 1983                | 1997                | -177                    |
| 14 | CHARQUINI SURESTE | BO      | E      | 1664                | 1736                | -95                     |
|    |                   |         | E      | 1736                | 1755                | -49                     |
|    |                   |         | E      | 1755                | 1792                | -153                    |
|    |                   |         | E      | 1792                | 1849                | -38                     |
|    |                   |         | E      | 1849                | 1868                | -26                     |
|    |                   |         | E      | 1868                | 1909                | -282                    |
|    |                   |         | E      | 1909                | 1940                | -196                    |
|    |                   |         | E      | 1940                | 1956                | -17                     |
|    |                   |         | E      | 1956                | 1963                | -37                     |
|    |                   |         | E      | 1963                | 1974                | -21                     |
|    |                   |         | E      | 1974                | 1983                | -45                     |
|    |                   |         | E      | 1983                | 1997                | -87                     |
| 15 | JANKHU UYU        | BO      | E      | 1658                | 1704                | -24                     |
|    |                   |         | E      | 1704                | 1734                | -35                     |
|    |                   |         | E      | 1734                | 1756                | -75                     |
|    |                   |         | E      | 1756                | 1775                | -13                     |
|    |                   |         | E      | 1775                | 1805                | -12                     |
|    |                   |         | E      | 1805                | 1817                | -111                    |
|    |                   |         | E      | 1817                | 1869                | -265                    |
|    |                   |         | E      | 1869                | 1908                | -127                    |
|    |                   |         | E      | 1908                | 1997                | -163                    |
| 16 | WILA LLUXITA      | BO      | E      | 1662                | 1703                | -37                     |
|    |                   |         | E      | 1703                | 1732                | -93                     |
|    |                   |         | E      | 1732                | 1755                | -214                    |
|    |                   |         | E      | 1755                | 1775                | -38                     |
|    |                   |         | E      | 1775                | 1800                | -17                     |
|    |                   |         | E      | 1800                | 1818                | -223                    |
|    |                   |         | E      | 1818                | 1849                | -54                     |
|    |                   |         | E      | 1849                | 1870                | -61                     |
|    |                   |         | E      | 1870                | 1909                | -116                    |
|    |                   |         | E      | 1909                | 1997                | -300                    |
| 17 | ZONGO             | BO5150  | E      | 1680                | 1732                | -106                    |
|    |                   |         | E      | 1732                | 1766                | -618                    |
|    |                   |         | E      | 1766                | 1781                | -46                     |
|    |                   |         | E      | 1781                | 1811                | -54                     |
|    |                   |         | E      | 1811                | 1822                | -103                    |
|    |                   |         | E      | 1822                | 1852                | -51                     |
|    |                   |         | E      | 1852                | 1871                | -93                     |
|    |                   |         | E      | 1871                | 1911                | -155                    |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1911       | 1956       | -48        |
|    |              |         | E      | 1956       | 1983       | -25        |
|    |              |         | E      | 1983       | 1991       | -84        |
|    |              |         | E      | 1991       | 1992       | -12        |
|    |              |         | E      | 1992       | 1993       | 1          |
|    |              |         | E      | 1993       | 1994       | -10        |
|    |              |         | E      | 1994       | 1995       | 6          |
|    |              |         | E      | 1995       | 1996       | -12        |
|    |              |         | E      | 1996       | 1997       | -16        |
|    |              |         | E      | 1997       | 1998       | -25        |
|    |              |         | E      | 1998       | 1999       | -27        |
|    |              |         | E      | 1999       | 2000       | -12        |
|    |              |         | E      | 2000       | 2001       | -5         |
|    |              |         | E      | 2001       | 2002       | -18        |
|    |              |         | E      | 2002       | 2003       | -35        |
| 18 | CIPRESES     | CL0071  | E      | 2003       | 2004       | -5         |
|    |              |         | E      | 2004       | 2005       | -29        |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         | E      | 1842       | 1858       | -129       |
|    |              |         | E      | 1858       | 1875       | -703       |
|    |              |         | E      | 1875       | 1886       | -407       |
|    |              |         | E      | 1886       | 1943       | -1074      |
|    |              |         | E      | 1943       | 1955       | -188       |
|    |              |         | E      | 1955       | 1968       | -328       |
|    |              |         | E      | 1968       | 1987       | -796       |
|    |              |         | E      | 1987       | 1997       | -58        |
|    |              |         | E      | 1997       | 2000       | -66        |
|    |              |         | E      | 2000       | 2004       | -52        |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
|    |              |         |        |            |            |            |
| 19 | ARGENTIERE   | FR0002  | E      | 1600       | 1612       | 400        |
|    |              |         | E      | 1612       | 1625       | -250       |
|    |              |         | E      | 1625       | 1654       | 300        |
|    |              |         | E      | 1654       | 1658       | -240       |
|    |              |         | E      | 1658       | 1665       | 160        |
|    |              |         | E      | 1665       | 1700       | -570       |
|    |              |         | E      | 1700       | 1713       | 550        |
|    |              |         | E      | 1713       | 1752       | -500       |
|    |              |         | E      | 1752       | 1782       | 650        |
|    |              |         | E      | 1782       | 1808       | -400       |
|    |              |         | E      | 1808       | 1819       | 500        |
|    |              |         | E      | 1819       | 1831       | -200       |
|    |              |         | E      | 1831       | 1838       | 60         |
|    |              |         | E      | 1838       | 1847       | -210       |
|    |              |         | E      | 1847       | 1857       | -40        |
|    |              |         | E      | 1857       | 1882       | -610       |
|    |              |         | E      | 1882       | 1893       | 260        |
|    |              |         | E      | 1893       | 1900       | -30        |
|    |              |         | E      | 1900       | 1911       | -280       |
|    |              |         | E      | 1911       | 1917       | 10         |
|    |              |         | E      | 1917       | 1921       | 150        |
|    |              |         | E      | 1921       | 1926       | 25         |
|    |              |         | E      | 1926       | 1936       | -195       |
|    |              |         | E      | 1936       | 1946       | -20        |
|    |              |         | E      | 1946       | 1958       | -290       |
|    |              |         | E      | 1958       | 1961       | -150       |
|    |              |         | E      | 1961       | 1970       | -40        |
|    |              |         | E      | 1970       | 1974       | 100        |
|    |              |         | E      | 1974       | 1980       | 40         |
|    |              |         | E      | 1980       | 1985       | 100        |
|    |              |         | E      | 1985       | 1986       | 3          |
|    |              |         | E      | 1986       | 1987       | 25         |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1987       | 1988       | 15         |
|    |              |         | E      | 1988       | 1989       | 9          |
|    |              |         | E      | 1989       | 1990       | 4          |
|    |              |         | E      | 1990       | 1991       | -11        |
|    |              |         | E      | 1991       | 1992       | -13        |
|    |              |         | E      | 1992       | 1993       | -25        |
|    |              |         | E      | 1993       | 1994       | -10        |
|    |              |         | E      | 1994       | 1995       | -22        |
|    |              |         | E      | 1995       | 1996       | -41        |
|    |              |         | E      | 1996       | 1997       | -40        |
|    |              |         | E      | 1997       | 1998       | -52        |
|    |              |         | E      | 1998       | 1999       | -39        |
|    |              |         | E      | 1999       | 2000       | -15        |
|    |              |         | E      | 2000       | 2001       | -21        |
|    |              |         | E      | 2001       | 2002       | -43        |
|    |              |         | E      | 2002       | 2003       | -33        |
|    |              |         | E      | 2003       | 2004       | -42        |
|    |              |         | E      | 2004       | 2005       | -60        |
| 20 | BOSSONS      | FR0004  | E      | 1580       | 1605       | 200        |
|    |              |         | E      | 1605       | 1610       | 200        |
|    |              |         | E      | 1610       | 1616       | -200       |
|    |              |         | E      | 1616       | 1643       | 272        |
|    |              |         | E      | 1643       | 1644       | 0          |
|    |              |         | E      | 1644       | 1664       | -322       |
|    |              |         | E      | 1664       | 1669       | 100        |
|    |              |         | E      | 1669       | 1679       | 0          |
|    |              |         | E      | 1679       | 1685       | 100        |
|    |              |         | E      | 1685       | 1700       | -350       |
|    |              |         | E      | 1700       | 1712       | 300        |
|    |              |         | E      | 1712       | 1730       | -300       |
|    |              |         | E      | 1730       | 1742       | -100       |
|    |              |         | E      | 1742       | 1760       | 100        |
|    |              |         | E      | 1760       | 1770       | 250        |
|    |              |         | E      | 1770       | 1777       | 200        |
|    |              |         | E      | 1777       | 1780       | -25        |
|    |              |         | E      | 1780       | 1785       | -275       |
|    |              |         | E      | 1785       | 1786       | -100       |
|    |              |         | E      | 1786       | 1787       | 0          |
|    |              |         | E      | 1787       | 1790       | 50         |
|    |              |         | E      | 1790       | 1797       | 30         |
|    |              |         | E      | 1797       | 1798       | 20         |
|    |              |         | E      | 1798       | 1799       | 20         |
|    |              |         | E      | 1799       | 1802       | 10         |
|    |              |         | E      | 1802       | 1806       | -180       |
|    |              |         | E      | 1806       | 1811       | 100        |
|    |              |         | E      | 1811       | 1812       | 50         |
|    |              |         | E      | 1812       | 1813       | 100        |
|    |              |         | E      | 1813       | 1815       | 160        |
|    |              |         | E      | 1815       | 1816       | 100        |
|    |              |         | E      | 1816       | 1817       | 40         |
|    |              |         | E      | 1817       | 1818       | 27         |
|    |              |         | E      | 1818       | 1823       | -202       |
|    |              |         | E      | 1823       | 1825       | 0          |
|    |              |         | E      | 1825       | 1829       | -125       |
|    |              |         | E      | 1829       | 1835       | 130        |
|    |              |         | E      | 1835       | 1840       | -80        |
|    |              |         | E      | 1840       | 1842       | 25         |
|    |              |         | E      | 1842       | 1845       | 75         |
|    |              |         | E      | 1845       | 1850       | -23        |
|    |              |         | E      | 1850       | 1854       | 50         |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1854       | 1856       | -2         |
|    |              |         | E      | 1856       | 1857       | -25        |
|    |              |         | E      | 1857       | 1859       | -75        |
|    |              |         | E      | 1859       | 1861       | -50        |
|    |              |         | E      | 1861       | 1862       | 25         |
|    |              |         | E      | 1862       | 1863       | 18         |
|    |              |         | E      | 1863       | 1865       | -221       |
|    |              |         | E      | 1865       | 1866       | -13        |
|    |              |         | E      | 1866       | 1867       | -11        |
|    |              |         | E      | 1867       | 1868       | -62        |
|    |              |         | E      | 1868       | 1869       | -17        |
|    |              |         | E      | 1869       | 1870       | -11        |
|    |              |         | E      | 1870       | 1871       | -14        |
|    |              |         | E      | 1871       | 1873       | -59        |
|    |              |         | E      | 1873       | 1874       | -15        |
|    |              |         | E      | 1874       | 1875       | 0          |
|    |              |         | E      | 1875       | 1878       | 45         |
|    |              |         | E      | 1878       | 1879       | 12         |
|    |              |         | E      | 1879       | 1880       | 18         |
|    |              |         | E      | 1880       | 1881       | 40         |
|    |              |         | E      | 1881       | 1882       | 39         |
|    |              |         | E      | 1882       | 1883       | 39         |
|    |              |         | E      | 1883       | 1884       | 49         |
|    |              |         | E      | 1884       | 1885       | 59         |
|    |              |         | E      | 1885       | 1886       | 44         |
|    |              |         | E      | 1886       | 1887       | -6         |
|    |              |         | E      | 1887       | 1888       | -3         |
|    |              |         | E      | 1888       | 1889       | 10         |
|    |              |         | E      | 1889       | 1890       | 20         |
|    |              |         | E      | 1890       | 1891       | -1         |
|    |              |         | E      | 1891       | 1892       | 46         |
|    |              |         | E      | 1892       | 1893       | -27        |
|    |              |         | E      | 1893       | 1894       | -46        |
|    |              |         | E      | 1894       | 1895       | -102       |
|    |              |         | E      | 1895       | 1896       | -31        |
|    |              |         | E      | 1896       | 1897       | -20        |
|    |              |         | E      | 1897       | 1898       | -10        |
|    |              |         | E      | 1898       | 1900       | -20        |
|    |              |         | E      | 1900       | 1903       | -50        |
|    |              |         | E      | 1903       | 1904       | -13        |
|    |              |         | E      | 1904       | 1905       | -7         |
|    |              |         | E      | 1905       | 1906       | 5          |
|    |              |         | E      | 1906       | 1907       | -15        |
|    |              |         | E      | 1907       | 1908       | -24        |
|    |              |         | E      | 1908       | 1909       | 6          |
|    |              |         | E      | 1909       | 1910       | -10        |
|    |              |         | E      | 1910       | 1911       | 48         |
|    |              |         | E      | 1911       | 1912       | 0          |
|    |              |         | E      | 1912       | 1913       | -6         |
|    |              |         | E      | 1913       | 1914       | 21         |
|    |              |         | E      | 1914       | 1915       | 23         |
|    |              |         | E      | 1915       | 1916       | 50         |
|    |              |         | E      | 1916       | 1917       | 51         |
|    |              |         | E      | 1917       | 1918       | 32         |
|    |              |         | E      | 1918       | 1919       | 24         |
|    |              |         | E      | 1919       | 1920       | 22         |
|    |              |         | E      | 1920       | 1921       | 10         |
|    |              |         | E      | 1921       | 1922       | -18        |
|    |              |         | E      | 1922       | 1923       | -14        |
|    |              |         | E      | 1923       | 1924       | -64        |
|    |              |         | E      | 1924       | 1925       | -56        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1925       | 1926       | -7         |
|    |              |         | E      | 1926       | 1927       | -28        |
|    |              |         | E      | 1927       | 1928       | -16        |
|    |              |         | E      | 1928       | 1929       | -20        |
|    |              |         | E      | 1929       | 1930       | -31        |
|    |              |         | E      | 1930       | 1931       | -26        |
|    |              |         | E      | 1931       | 1932       | -9         |
|    |              |         | E      | 1932       | 1933       | -45        |
|    |              |         | E      | 1933       | 1934       | 63         |
|    |              |         | E      | 1934       | 1935       | -1         |
|    |              |         | E      | 1935       | 1936       | 35         |
|    |              |         | E      | 1936       | 1937       | -42        |
|    |              |         | E      | 1937       | 1938       | -35        |
|    |              |         | E      | 1938       | 1941       | 77         |
|    |              |         | E      | 1941       | 1945       | -29        |
|    |              |         | E      | 1945       | 1946       | -100       |
|    |              |         | E      | 1946       | 1947       | -53        |
|    |              |         | E      | 1947       | 1948       | -67        |
|    |              |         | E      | 1948       | 1949       | -80        |
|    |              |         | E      | 1949       | 1950       | -159       |
|    |              |         | E      | 1950       | 1952       | -117       |
|    |              |         | E      | 1952       | 1953       | -103       |
|    |              |         | E      | 1953       | 1956       | 231        |
|    |              |         | E      | 1956       | 1959       | 95         |
|    |              |         | E      | 1959       | 1962       | -60        |
|    |              |         | E      | 1962       | 1964       | 30         |
|    |              |         | E      | 1964       | 1966       | 40         |
|    |              |         | E      | 1966       | 1967       | 10         |
|    |              |         | E      | 1967       | 1969       | 15         |
|    |              |         | E      | 1969       | 1970       | 20         |
|    |              |         | E      | 1970       | 1973       | 46         |
|    |              |         | E      | 1973       | 1975       | 52         |
|    |              |         | E      | 1975       | 1976       | -15        |
|    |              |         | E      | 1976       | 1977       | -20        |
|    |              |         | E      | 1977       | 1978       | -30        |
|    |              |         | E      | 1978       | 1979       | 25         |
|    |              |         | E      | 1979       | 1980       | 15         |
|    |              |         | E      | 1980       | 1981       | 30         |
|    |              |         | E      | 1981       | 1982       | 20         |
|    |              |         | E      | 1982       | 1983       | 0          |
|    |              |         | E      | 1983       | 1984       | -10        |
|    |              |         | E      | 1984       | 1985       | -4         |
|    |              |         | E      | 1985       | 1986       | -10        |
|    |              |         | E      | 1986       | 1987       | -46        |
|    |              |         | E      | 1987       | 1988       | -39        |
|    |              |         | E      | 1988       | 1989       | -35        |
|    |              |         | E      | 1989       | 1990       | -77        |
|    |              |         | E      | 1990       | 1991       | -110       |
|    |              |         | E      | 1991       | 1992       | -66        |
|    |              |         | E      | 1992       | 1993       | -81        |
|    |              |         | E      | 1993       | 1994       | -74        |
|    |              |         | E      | 1994       | 1995       | -18        |
|    |              |         | E      | 1995       | 1996       | -22        |
|    |              |         | E      | 1996       | 1997       | 30         |
|    |              |         | E      | 1997       | 1998       | 22         |
|    |              |         | E      | 1998       | 1999       | 9          |
|    |              |         | E      | 1999       | 2000       | -18        |
|    |              |         | E      | 2000       | 2001       | -13        |
|    |              |         | E      | 2001       | 2002       | -29        |
|    |              |         | E      | 2002       | 2003       | 0          |
|    |              |         | E      | 2003       | 2004       | -6         |



| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 2004       | 2005       | -27        |
| 21 | MER DE GLACE | FR0003  | E      | 1570       | 1575       | 195        |
|    |              |         | E      | 1575       | 1580       | 36         |
|    |              |         | E      | 1580       | 1591       | 103        |
|    |              |         | E      | 1591       | 1601       | 725        |
|    |              |         | E      | 1601       | 1605       | 30         |
|    |              |         | E      | 1605       | 1610       | 36         |
|    |              |         | E      | 1610       | 1616       | -41        |
|    |              |         | E      | 1616       | 1622       | -261       |
|    |              |         | E      | 1622       | 1625       | 0          |
|    |              |         | E      | 1625       | 1641       | 163        |
|    |              |         | E      | 1641       | 1642       | 100        |
|    |              |         | E      | 1642       | 1643       | 100        |
|    |              |         | E      | 1643       | 1644       | 2          |
|    |              |         | E      | 1644       | 1660       | -327       |
|    |              |         | E      | 1660       | 1664       | 250        |
|    |              |         | E      | 1664       | 1669       | -50        |
|    |              |         | E      | 1669       | 1685       | 77         |
|    |              |         | E      | 1685       | 1690       | -60        |
|    |              |         | E      | 1690       | 1697       | -490       |
|    |              |         | E      | 1697       | 1707       | -127       |
|    |              |         | E      | 1707       | 1716       | 600        |
|    |              |         | E      | 1716       | 1720       | 50         |
|    |              |         | E      | 1720       | 1723       | -90        |
|    |              |         | E      | 1723       | 1725       | 40         |
|    |              |         | E      | 1725       | 1730       | -23        |
|    |              |         | E      | 1730       | 1742       | -118       |
|    |              |         | E      | 1742       | 1760       | -414       |
|    |              |         | E      | 1760       | 1764       | 5          |
|    |              |         | E      | 1764       | 1770       | -90        |
|    |              |         | E      | 1770       | 1772       | 165        |
|    |              |         | E      | 1772       | 1775       | 180        |
|    |              |         | E      | 1775       | 1777       | 190        |
|    |              |         | E      | 1777       | 1778       | 55         |
|    |              |         | E      | 1778       | 1779       | -10        |
|    |              |         | E      | 1779       | 1781       | -133       |
|    |              |         | E      | 1781       | 1784       | -125       |
|    |              |         | E      | 1784       | 1787       | -82        |
|    |              |         | E      | 1787       | 1795       | -72        |
|    |              |         | E      | 1795       | 1799       | 26         |
|    |              |         | E      | 1799       | 1802       | 54         |
|    |              |         | E      | 1802       | 1810       | 57         |
|    |              |         | E      | 1810       | 1813       | 151        |
|    |              |         | E      | 1813       | 1815       | 49         |
|    |              |         | E      | 1815       | 1818       | 214        |
|    |              |         | E      | 1818       | 1820       | 4          |
|    |              |         | E      | 1820       | 1821       | 7          |
|    |              |         | E      | 1821       | 1823       | -22        |
|    |              |         | E      | 1823       | 1825       | 12         |
|    |              |         | E      | 1825       | 1826       | 0          |
|    |              |         | E      | 1826       | 1830       | -240       |
|    |              |         | E      | 1830       | 1835       | 60         |
|    |              |         | E      | 1835       | 1842       | -169       |
|    |              |         | E      | 1842       | 1846       | 152        |
|    |              |         | E      | 1846       | 1852       | 142        |
|    |              |         | E      | 1852       | 1854       | -20        |
|    |              |         | E      | 1854       | 1855       | 5          |
|    |              |         | E      | 1855       | 1856       | -26        |
|    |              |         | E      | 1856       | 1857       | 0          |
|    |              |         | E      | 1857       | 1861       | -191       |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1861       | 1862       | -13        |
|    |              |         | E      | 1862       | 1863       | -103       |
|    |              |         | E      | 1863       | 1864       | 3          |
|    |              |         | E      | 1864       | 1865       | 0          |
|    |              |         | E      | 1865       | 1866       | 7          |
|    |              |         | E      | 1866       | 1867       | 14         |
|    |              |         | E      | 1867       | 1868       | -144       |
|    |              |         | E      | 1868       | 1869       | -152       |
|    |              |         | E      | 1869       | 1870       | -89        |
|    |              |         | E      | 1870       | 1874       | -221       |
|    |              |         | E      | 1874       | 1878       | -268       |
|    |              |         | E      | 1878       | 1879       | 2          |
|    |              |         | E      | 1879       | 1880       | 25         |
|    |              |         | E      | 1880       | 1881       | 64         |
|    |              |         | E      | 1881       | 1882       | -89        |
|    |              |         | E      | 1882       | 1883       | -35        |
|    |              |         | E      | 1883       | 1885       | -30        |
|    |              |         | E      | 1885       | 1886       | 32         |
|    |              |         | E      | 1886       | 1887       | 0          |
|    |              |         | E      | 1887       | 1888       | 0          |
|    |              |         | E      | 1888       | 1889       | 6          |
|    |              |         | E      | 1889       | 1890       | 68         |
|    |              |         | E      | 1890       | 1891       | 19         |
|    |              |         | E      | 1891       | 1892       | 25         |
|    |              |         | E      | 1892       | 1893       | 9          |
|    |              |         | E      | 1893       | 1894       | -9         |
|    |              |         | E      | 1894       | 1895       | 24         |
|    |              |         | E      | 1895       | 1896       | -17        |
|    |              |         | E      | 1896       | 1897       | -12        |
|    |              |         | E      | 1897       | 1898       | -11        |
|    |              |         | E      | 1898       | 1899       | -17        |
|    |              |         | E      | 1899       | 1900       | -15        |
|    |              |         | E      | 1900       | 1906       | -76        |
|    |              |         | E      | 1906       | 1911       | -42        |
|    |              |         | E      | 1911       | 1912       | -42        |
|    |              |         | E      | 1912       | 1913       | -15        |
|    |              |         | E      | 1913       | 1914       | -9         |
|    |              |         | E      | 1914       | 1915       | 26         |
|    |              |         | E      | 1915       | 1916       | 14         |
|    |              |         | E      | 1916       | 1917       | 0          |
|    |              |         | E      | 1917       | 1918       | 0          |
|    |              |         | E      | 1918       | 1919       | -34        |
|    |              |         | E      | 1919       | 1920       | 0          |
|    |              |         | E      | 1920       | 1921       | -50        |
|    |              |         | E      | 1921       | 1923       | 132        |
|    |              |         | E      | 1923       | 1924       | 47         |
|    |              |         | E      | 1924       | 1925       | -52        |
|    |              |         | E      | 1925       | 1926       | 95         |
|    |              |         | E      | 1926       | 1927       | 0          |
|    |              |         | E      | 1927       | 1928       | -96        |
|    |              |         | E      | 1928       | 1929       | -7         |
|    |              |         | E      | 1929       | 1930       | 0          |
|    |              |         | E      | 1930       | 1931       | 118        |
|    |              |         | E      | 1931       | 1939       | -288       |
|    |              |         | E      | 1939       | 1945       | -50        |
|    |              |         | E      | 1945       | 1949       | -40        |
|    |              |         | E      | 1949       | 1950       | -30        |
|    |              |         | E      | 1950       | 1952       | -60        |
|    |              |         | E      | 1952       | 1958       | -160       |
|    |              |         | E      | 1958       | 1967       | -180       |
|    |              |         | E      | 1967       | 1969       | -10        |

| NR | GLACIER NAME      | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|-------------------|---------|--------|------------|------------|------------|
|    |                   |         |        | D M Y      | D M Y      | IN METERS  |
|    |                   |         | E      | 1969       | 1970       | 20         |
|    |                   |         | E      | 1970       | 1971       | 5          |
|    |                   |         | E      | 1971       | 1972       | 5          |
|    |                   |         | E      | 1972       | 1976       | 45         |
|    |                   |         | E      | 1976       | 1977       | 25         |
|    |                   |         | E      | 1977       | 1978       | 0          |
|    |                   |         | E      | 1978       | 1979       | 2          |
|    |                   |         | E      | 1979       | 1980       | 3          |
|    |                   |         | E      | 1980       | 1981       | 5          |
|    |                   |         | E      | 1981       | 1982       | 5          |
|    |                   |         | E      | 1982       | 1983       | 3          |
|    |                   |         | E      | 1983       | 1984       | 3          |
|    |                   |         | E      | 1984       | 1985       | 1          |
|    |                   |         | E      | 1985       | 1986       | 1          |
|    |                   |         | E      | 1986       | 1987       | 0          |
|    |                   |         | E      | 1987       | 1988       | 13         |
|    |                   |         | E      | 1988       | 1989       | 0          |
|    |                   |         | E      | 1989       | 1990       | 2          |
|    |                   |         | E      | 1990       | 1991       | 5          |
|    |                   |         | E      | 1991       | 1992       | 0          |
|    |                   |         | E      | 1992       | 1993       | 0          |
|    |                   |         | E      | 1993       | 1994       | 0          |
|    |                   |         | E      | 1994       | 1995       | 0          |
|    |                   |         | E      | 1995       | 1996       | -55        |
|    |                   |         | E      | 1996       | 1997       | -33        |
|    |                   |         | E      | 1997       | 1998       | -5         |
|    |                   |         | E      | 1998       | 1999       | -30        |
|    |                   |         | E      | 1999       | 2000       | -39        |
|    |                   |         | E      | 2000       | 2001       | -36        |
|    |                   |         | E      | 2001       | 2002       | -82        |
|    |                   |         | E      | 2002       | 2003       | -20        |
|    | <u>GREENLAND</u>  |         |        |            |            |            |
| 22 | LYNGMARKSBRAE     | GL      | E      | 1812       | 1848       | 0          |
|    |                   |         | E      | 1848       | 1894       | 400        |
|    |                   |         | E      | 1894       | 1897       | -20        |
|    |                   |         | E      | 1897       | 1912       | -70        |
|    |                   |         | E      | 1912       | 1923       | -150       |
|    |                   |         | E      | 1923       | 1932       | -500       |
|    |                   |         | E      | 1932       | 1942       | -200       |
|    |                   |         | E      | 1942       | 1953       | -140       |
|    |                   |         | E      | 1953       | 1964       | 0          |
|    |                   |         | E      | 1964       | 1985       | 0          |
|    |                   |         | E      | 1985       | 2005       | 0          |
|    | <u>ICELAND</u>    |         |        |            |            |            |
| 23 | SOLHEIMAJOEKULL W | IS0113A | E      | 1705       | 1740       | 400        |
|    |                   |         | E      | 1740       | 1783       | -2000      |
|    |                   |         | E      | 1783       | 1794       | 1600       |
|    |                   |         | E      | 1794       | 1820       | 400        |
|    |                   |         | E      | 1820       | 1860       | 0          |
|    |                   |         | E      | 1860       | 1890       | -100       |
|    |                   |         | E      | 1890       | 1904       | -300       |
|    |                   |         | E      | 1904       | 1930       | -66        |
|    | <u>ITALY</u>      |         |        |            |            |            |
| 24 | PRE DE BAR        | IT0235  | E      | 1781       | 1797       | -275       |
|    |                   |         | E      | 1797       | 1818       | 400        |
|    |                   |         | E      | 1818       | 1820       | -10        |
|    |                   |         | E      | 1820       | 1821       | -10        |
|    |                   |         | E      | 1821       | 1842       | -480       |
|    |                   |         | E      | 1842       | 1851       | 420        |
|    |                   |         | E      | 1851       | 1856       | -20        |
|    |                   |         | E      | 1856       | 1860       | -115       |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1860       | 1861       | 0          |
|    |              |         | E      | 1861       | 1865       | -135       |
|    |              |         | E      | 1865       | 1875       | -430       |
|    |              |         | E      | 1875       | 1880       | -220       |
|    |              |         | E      | 1880       | 1882       | 60         |
|    |              |         | E      | 1882       | 1890       | 172        |
|    |              |         | E      | 1890       | 1892       | -10        |
|    |              |         | E      | 1892       | 1893       | -5         |
|    |              |         | E      | 1893       | 1897       | -29        |
|    |              |         | E      | 1897       | 1909       | -48        |
|    |              |         | E      | 1909       | 1910       | -17        |
|    |              |         | E      | 1910       | 1911       | -5         |
|    |              |         | E      | 1911       | 1915       | -140       |
|    |              |         | E      | 1915       | 1917       | 45         |
|    |              |         | E      | 1917       | 1922       | 165        |
|    |              |         | E      | 1922       | 1924       | -14        |
|    |              |         | E      | 1924       | 1929       | -14        |
|    |              |         | E      | 1929       | 1930       | -14        |
|    |              |         | E      | 1930       | 1931       | -5         |
|    |              |         | E      | 1931       | 1932       | -7         |
|    |              |         | E      | 1932       | 1933       | -36        |
|    |              |         | E      | 1933       | 1934       | -33        |
|    |              |         | E      | 1934       | 1935       | -34        |
|    |              |         | E      | 1935       | 1936       | -18        |
|    |              |         | E      | 1936       | 1937       | -23        |
|    |              |         | E      | 1937       | 1938       | -22        |
|    |              |         | E      | 1938       | 1939       | -24        |
|    |              |         | E      | 1939       | 1940       | 20         |
|    |              |         | E      | 1940       | 1941       | 6          |
|    |              |         | E      | 1941       | 1942       | 23         |
|    |              |         | E      | 1942       | 1943       | -8         |
|    |              |         | E      | 1943       | 1945       | -25        |
|    |              |         | E      | 1945       | 1946       | -31        |
|    |              |         | E      | 1946       | 1947       | -6         |
|    |              |         | E      | 1947       | 1948       | -50        |
|    |              |         | E      | 1948       | 1949       | -10        |
|    |              |         | E      | 1949       | 1950       | -11        |
|    |              |         | E      | 1950       | 1951       | -24        |
|    |              |         | E      | 1951       | 1952       | -10        |
|    |              |         | E      | 1952       | 1953       | -12        |
|    |              |         | E      | 1953       | 1954       | -71        |
|    |              |         | E      | 1954       | 1955       | -1         |
|    |              |         | E      | 1955       | 1956       | -3         |
|    |              |         | E      | 1956       | 1957       | -7         |
|    |              |         | E      | 1957       | 1958       | -4         |
|    |              |         | E      | 1958       | 1959       | -3         |
|    |              |         | E      | 1959       | 1960       | -7         |
|    |              |         | E      | 1960       | 1961       | -26        |
|    |              |         | E      | 1961       | 1962       | -61        |
|    |              |         | E      | 1962       | 1963       | 2          |
|    |              |         | E      | 1963       | 1964       | 9          |
|    |              |         | E      | 1964       | 1965       | 5          |
|    |              |         | E      | 1965       | 1966       | 6          |
|    |              |         | E      | 1966       | 1967       | 20         |
|    |              |         | E      | 1967       | 1968       | 10         |
|    |              |         | E      | 1968       | 1969       | 15         |
|    |              |         | E      | 1969       | 1970       | 20         |
|    |              |         | E      | 1970       | 1971       | 12         |
|    |              |         | E      | 1971       | 1972       | 5          |
|    |              |         | E      | 1972       | 1973       | 25         |
|    |              |         | E      | 1973       | 1974       | 8          |

| NR | GLACIER NAME       | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------------|---------|--------|------------|------------|------------|
|    |                    |         |        | D M Y      | D M Y      | IN METERS  |
|    |                    |         | E      | 1974       | 1975       | 8          |
|    |                    |         | E      | 1975       | 1976       | 3          |
|    |                    |         | E      | 1976       | 1977       | 8          |
|    |                    |         | E      | 1977       | 1978       | 2          |
|    |                    |         | E      | 1978       | 1979       | -1         |
|    |                    |         | E      | 1979       | 1980       | -37        |
|    |                    |         | E      | 1980       | 1981       | 19         |
|    |                    |         | E      | 1981       | 1982       | 12         |
|    |                    |         | E      | 1982       | 1983       | 12         |
|    |                    |         | E      | 1983       | 1984       | 12         |
|    |                    |         | E      | 1984       | 1985       | 0          |
|    |                    |         | E      | 1985       | 1986       | 14         |
|    |                    |         | E      | 1986       | 1987       | 8          |
|    |                    |         | E      | 1987       | 1988       | 6          |
|    |                    |         | E      | 1988       | 1989       | 3          |
|    |                    |         | E      | 1989       | 1990       | -1         |
|    |                    |         | E      | 1990       | 1991       | -7         |
|    |                    |         | E      | 1991       | 1992       | -32        |
|    |                    |         | E      | 1992       | 1993       | -7         |
|    |                    |         | E      | 1993       | 1994       | -13        |
|    |                    |         | E      | 1994       | 1995       | -13        |
|    |                    |         | E      | 1995       | 1996       | -19        |
|    |                    |         | E      | 1996       | 1997       | -15        |
|    |                    |         | E      | 1997       | 1998       | -23        |
|    |                    |         | E      | 1998       | 1999       | -17        |
|    |                    |         | E      | 1999       | 2000       | -16        |
|    |                    |         | E      | 2000       | 2001       | -20        |
|    |                    |         | E      | 2001       | 2002       | -30        |
|    |                    |         | E      | 2002       | 2003       | -20        |
|    |                    |         | E      | 2003       | 2004       | -34        |
|    |                    |         | E      | 2004       | 2005       | -49        |
|    | <u>NEW ZEALAND</u> |         |        |            |            |            |
| 25 | FRANZ JOSEF        | NZ      | E      | 1600       | 1780       | -560       |
|    |                    |         | E      | 1780       | 1820       | 141        |
|    |                    |         | E      | 1820       | 1865       | -240       |
|    |                    |         | E      | 1865       | 1867       | -21        |
|    |                    |         | E      | 1867       | 1886       | -29        |
|    |                    |         | E      | 1886       | 1894       | -351       |
|    | <u>NORWAY</u>      |         |        |            |            |            |
| 26 | BERGSETBREEN       | NO31013 | E      | 1743       | 1800       | -156       |
|    |                    |         | E      | 1800       | 1817       | -253       |
|    |                    |         | E      | 1817       | 1822       | -220       |
|    |                    |         | E      | 1822       | 1829       | -167       |
|    |                    |         | E      | 1829       | 1844       | 236        |
|    |                    |         | E      | 1844       | 1845       | -40        |
|    |                    |         | E      | 1845       | 1851       | -251       |
|    |                    |         | E      | 1851       | 1857       | 127        |
|    |                    |         | E      | 1857       | 1864       | -360       |
|    |                    |         | E      | 1864       | 1868       | -90        |
|    |                    |         | E      | 1868       | 1876       | 156        |
|    |                    |         | E      | 1876       | 1878       | -20        |
|    |                    |         | E      | 1878       | 1884       | -121       |
|    |                    |         | E      | 1884       | 1890       | -137       |
|    |                    |         | E      | 1890       | 1896       | -154       |
|    |                    |         | E      | 1896       | 1899       | -98        |
|    |                    |         | C      | 1899       | 1903       | -113       |
|    |                    |         | C      | 1903       | 1907       | 61         |
|    |                    |         | C      | 1907       | 1908       | 42         |
|    |                    |         | C      | 1908       | 1909       | 18         |
|    |                    |         | C      | 1909       | 1910       | 15         |
|    |                    |         | C      | 1910       | 1911       | -11        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | C      | 1911       | 1912       | -20        |
|    |              |         | C      | 1912       | 1913       | -5         |
|    |              |         | C      | 1913       | 1914       | -13        |
|    |              |         | C      | 1914       | 1915       | -25        |
|    |              |         | C      | 1915       | 1916       | -21        |
|    |              |         | C      | 1916       | 1917       | -21        |
|    |              |         | C      | 1917       | 1918       | -25        |
|    |              |         | C      | 1918       | 1919       | -27        |
|    |              |         | C      | 1919       | 1920       | -6         |
|    |              |         | C      | 1920       | 1921       | -20        |
|    |              |         | C      | 1921       | 1922       | -12        |
|    |              |         | C      | 1922       | 1923       | 21         |
|    |              |         | C      | 1923       | 1924       | 31         |
|    |              |         | C      | 1924       | 1925       | 52         |
|    |              |         | C      | 1925       | 1926       | -8         |
|    |              |         | C      | 1926       | 1927       | 2          |
|    |              |         | C      | 1927       | 1928       | 3          |
|    |              |         | C      | 1928       | 1929       | 8          |
|    |              |         | C      | 1929       | 1930       | 17         |
|    |              |         | C      | 1930       | 1931       | 2          |
|    |              |         | C      | 1931       | 1932       | -6         |
|    |              |         | C      | 1932       | 1933       | -6         |
|    |              |         | C      | 1933       | 1934       | -29        |
|    |              |         | C      | 1934       | 1935       | -14        |
|    |              |         | C      | 1935       | 1936       | -40        |
|    |              |         | C      | 1936       | 1937       | -44        |
|    |              |         | C      | 1937       | 1938       | 4          |
|    |              |         | C      | 1938       | 1939       | -41        |
|    |              |         | C      | 1939       | 1940       | -33        |
|    |              |         | C      | 1940       | 1941       | -29        |
|    |              |         | C      | 1941       | 1942       | -36        |
|    |              |         | C      | 1942       | 1943       | -90        |
|    |              |         | C      | 1943       | 1944       | -43        |
|    |              |         | C      | 1944       | 1945       | -160       |
|    |              |         | E      | 1945       | 1966       | -541       |
|    |              |         | C      | 1966       | 1967       | 10         |
|    |              |         | C      | 1967       | 1968       | 12         |
|    |              |         | E      | 1968       | 1993       | 390        |
|    |              |         | E      | 1993       | 1996       | 157        |
|    |              |         | C      | 1996       | 1997       | 18         |
|    |              |         | C      | 1997       | 1998       | 1          |
|    |              |         | C      | 1998       | 1999       | -3         |
|    |              |         | C      | 1999       | 2000       | 9          |
|    |              |         | C      | 2000       | 2001       | -13        |
|    |              |         | C      | 2001       | 2002       | -17        |
|    |              |         | C      | 2002       | 2003       | -19        |
|    |              |         | C      | 2003       | 2004       | -45        |
|    |              |         | C      | 2004       | 2005       | -15        |
| 27 | BOEYABREEN   | NO33014 | E      | 1867       | 1868       | 20         |
|    |              |         | E      | 1868       | 1872       | 126        |
|    |              |         | E      | 1872       | 1874       | -48        |
|    |              |         | E      | 1874       | 1880       | -287       |
|    |              |         | E      | 1880       | 1884       | 34         |
|    |              |         | E      | 1884       | 1886       | 35         |
|    |              |         | E      | 1886       | 1888       | 60         |
|    |              |         | E      | 1888       | 1895       | -75        |
|    |              |         | E      | 1895       | 1896       | -37        |
|    |              |         | E      | 1896       | 1897       | -38        |
|    |              |         | E      | 1897       | 1899       | -80        |
|    |              |         | C      | 1899       | 1903       | -81        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | C      | 1903       | 1904       | -14        |
|    |              |         | C      | 1904       | 1906       | 84         |
|    |              |         | C      | 1906       | 1907       | 13         |
|    |              |         | C      | 1907       | 1908       | 36         |
|    |              |         | C      | 1908       | 1909       | 5          |
|    |              |         | C      | 1909       | 1910       | -6         |
|    |              |         | C      | 1910       | 1911       | 2          |
|    |              |         | C      | 1911       | 1912       | -4         |
|    |              |         | C      | 1912       | 1913       | -12        |
|    |              |         | C      | 1913       | 1914       | -40        |
|    |              |         | C      | 1914       | 1915       | -57        |
|    |              |         | C      | 1915       | 1916       | -7         |
|    |              |         | C      | 1916       | 1917       | -3         |
|    |              |         | C      | 1917       | 1919       | -10        |
|    |              |         | C      | 1919       | 1920       | -11        |
|    |              |         | C      | 1920       | 1921       | -37        |
|    |              |         | C      | 1921       | 1922       | 30         |
|    |              |         | C      | 1922       | 1923       | 15         |
|    |              |         | C      | 1923       | 1924       | 15         |
|    |              |         | C      | 1924       | 1925       | 45         |
|    |              |         | C      | 1925       | 1926       | 13         |
|    |              |         | C      | 1926       | 1927       | 13         |
|    |              |         | C      | 1927       | 1928       | 8          |
|    |              |         | C      | 1928       | 1929       | 3          |
|    |              |         | C      | 1929       | 1930       | 17         |
|    |              |         | C      | 1930       | 1931       | 5          |
|    |              |         | C      | 1931       | 1932       | -11        |
|    |              |         | C      | 1932       | 1933       | -10        |
|    |              |         | C      | 1933       | 1934       | -10        |
|    |              |         | C      | 1934       | 1935       | -18        |
|    |              |         | C      | 1935       | 1936       | -35        |
|    |              |         | C      | 1936       | 1937       | -45        |
|    |              |         | C      | 1937       | 1938       | -50        |
|    |              |         | C      | 1938       | 1939       | -30        |
|    |              |         | C      | 1939       | 1940       | -50        |
|    |              |         | C      | 1940       | 1941       | -90        |
|    |              |         | C      | 1941       | 1942       | -15        |
|    |              |         | C      | 1942       | 1943       | -115       |
|    |              |         | C      | 1943       | 1944       | -55        |
|    |              |         | C      | 1944       | 1945       | 15         |
|    |              |         | C      | 1945       | 1946       | -20        |
|    |              |         | C      | 1946       | 1949       | -20        |
|    |              |         | C      | 1949       | 1950       | -30        |
|    |              |         | C      | 1950       | 1951       | -10        |
|    |              |         | C      | 1951       | 1952       | -5         |
|    |              |         | C      | 1952       | 1953       | 10         |
|    |              |         | E      | 1953       | 1966       | -268       |
|    |              |         | E      | 1966       | 2003       | 45         |
|    |              |         | C      | 2003       | 2004       | -8         |
|    |              |         | C      | 2004       | 2005       | -9         |
| 28 | BONDHUSBREA  | NO20408 | E      | 1801       | 1807       | 15         |
|    |              |         | E      | 1807       | 1822       | -21        |
|    |              |         | E      | 1822       | 1845       | -155       |
|    |              |         | E      | 1845       | 1851       | 68         |
|    |              |         | E      | 1851       | 1853       | 5          |
|    |              |         | E      | 1853       | 1855       | 71         |
|    |              |         | E      | 1855       | 1858       | -69        |
|    |              |         | E      | 1858       | 1859       | -20        |
|    |              |         | E      | 1859       | 1860       | 20         |
|    |              |         | E      | 1860       | 1861       | -25        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1861       | 1863       | 25         |
|    |              |         | E      | 1863       | 1865       | -75        |
|    |              |         | E      | 1865       | 1869       | 137        |
|    |              |         | E      | 1869       | 1875       | 71         |
|    |              |         | E      | 1875       | 1884       | -67        |
|    |              |         | E      | 1884       | 1886       | 30         |
|    |              |         | E      | 1886       | 1888       | 14         |
|    |              |         | E      | 1888       | 1889       | 3          |
|    |              |         | E      | 1889       | 1890       | 0          |
|    |              |         | E      | 1890       | 1895       | -30        |
|    |              |         | E      | 1895       | 1897       | -72        |
|    |              |         | E      | 1897       | 1900       | -35        |
|    |              |         | E      | 1900       | 1901       | -1         |
|    |              |         | E      | 1901       | 1904       | 5          |
|    |              |         | C      | 1904       | 1905       | 17         |
|    |              |         | C      | 1905       | 1906       | 27         |
|    |              |         | C      | 1906       | 1907       | 7          |
|    |              |         | C      | 1907       | 1908       | 24         |
|    |              |         | C      | 1908       | 1909       | 13         |
|    |              |         | C      | 1909       | 1910       | 29         |
|    |              |         | C      | 1910       | 1911       | 7          |
|    |              |         | C      | 1911       | 1912       | -6         |
|    |              |         | C      | 1912       | 1913       | -26        |
|    |              |         | C      | 1913       | 1914       | -8         |
|    |              |         | C      | 1914       | 1915       | -20        |
|    |              |         | C      | 1915       | 1916       | -6         |
|    |              |         | C      | 1916       | 1917       | -7         |
|    |              |         | C      | 1917       | 1918       | -12        |
|    |              |         | C      | 1918       | 1919       | -4         |
|    |              |         | C      | 1919       | 1920       | -16        |
|    |              |         | C      | 1920       | 1921       | -16        |
|    |              |         | C      | 1921       | 1922       | 14         |
|    |              |         | C      | 1922       | 1923       | 9          |
|    |              |         | C      | 1923       | 1924       | 39         |
|    |              |         | C      | 1924       | 1925       | 14         |
|    |              |         | C      | 1925       | 1926       | 7          |
|    |              |         | C      | 1926       | 1927       | 3          |
|    |              |         | C      | 1927       | 1928       | -7         |
|    |              |         | C      | 1928       | 1929       | 3          |
|    |              |         | C      | 1929       | 1930       | 15         |
|    |              |         | C      | 1930       | 1931       | -11        |
|    |              |         | C      | 1931       | 1932       | -12        |
|    |              |         | C      | 1932       | 1933       | 11         |
|    |              |         | C      | 1933       | 1934       | -15        |
|    |              |         | C      | 1934       | 1935       | -45        |
|    |              |         | C      | 1935       | 1936       | -26        |
|    |              |         | C      | 1936       | 1937       | -29        |
|    |              |         | C      | 1937       | 1938       | -44        |
|    |              |         | C      | 1938       | 1939       | -54        |
|    |              |         | C      | 1939       | 1940       | -233       |
|    |              |         | C      | 1940       | 1942       | -33        |
|    |              |         | C      | 1942       | 1943       | -32        |
|    |              |         | C      | 1943       | 1951       | -87        |
|    |              |         | C      | 1951       | 1953       | 6          |
|    |              |         | C      | 1953       | 1955       | -13        |
|    |              |         | C      | 1955       | 1957       | 9          |
|    |              |         | C      | 1957       | 1958       | 14         |
|    |              |         | C      | 1958       | 1959       | -16        |
|    |              |         | C      | 1959       | 1960       | 0          |
|    |              |         | C      | 1960       | 1961       | 3          |
|    |              |         | C      | 1961       | 1962       | -8         |



| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | C      | 1962       | 1964       | -6         |
|    |              |         | C      | 1964       | 1966       | 5          |
|    |              |         | C      | 1966       | 1967       | -1         |
|    |              |         | C      | 1967       | 1968       | -1         |
|    |              |         | C      | 1968       | 1969       | -3         |
|    |              |         | C      | 1969       | 1971       | -16        |
|    |              |         | C      | 1971       | 1972       | -7         |
|    |              |         | C      | 1972       | 1973       | -5         |
|    |              |         | C      | 1973       | 1974       | 3          |
|    |              |         | C      | 1974       | 1976       | 5          |
|    |              |         | C      | 1976       | 1977       | 7          |
|    |              |         | C      | 1977       | 1979       | 10         |
|    |              |         | C      | 1979       | 1980       | 2          |
|    |              |         | C      | 1980       | 1982       | 5          |
|    |              |         | C      | 1982       | 1983       | 0          |
|    |              |         | E      | 1983       | 1996       | 198        |
|    |              |         | C      | 1996       | 1997       | -43        |
|    |              |         | C      | 1997       | 1998       | 14         |
|    |              |         | C      | 1998       | 1999       | -1         |
|    |              |         | C      | 1999       | 2000       | -24        |
|    |              |         | C      | 2000       | 2001       | -9         |
|    |              |         | C      | 2001       | 2002       | -15        |
|    |              |         | C      | 2002       | 2003       | -21        |
|    |              |         | C      | 2003       | 2004       | -37        |
|    |              |         | C      | 2004       | 2005       | -4         |
| 29 | BUERBREEN    | NO21307 | E      | 1822       | 1830       | -364       |
|    |              |         | E      | 1830       | 1846       | 41         |
|    |              |         | E      | 1846       | 1847       | 41         |
|    |              |         | E      | 1847       | 1852       | 272        |
|    |              |         | E      | 1852       | 1859       | -191       |
|    |              |         | E      | 1859       | 1860       | 25         |
|    |              |         | E      | 1860       | 1864       | -29        |
|    |              |         | E      | 1864       | 1869       | 263        |
|    |              |         | E      | 1869       | 1870       | 80         |
|    |              |         | E      | 1870       | 1871       | 33         |
|    |              |         | E      | 1871       | 1875       | 77         |
|    |              |         | E      | 1875       | 1878       | 30         |
|    |              |         | E      | 1878       | 1879       | 0          |
|    |              |         | E      | 1879       | 1884       | -65        |
|    |              |         | E      | 1884       | 1885       | 9          |
|    |              |         | E      | 1885       | 1886       | -21        |
|    |              |         | E      | 1886       | 1888       | 43         |
|    |              |         | E      | 1888       | 1889       | -8         |
|    |              |         | E      | 1889       | 1890       | 20         |
|    |              |         | E      | 1890       | 1892       | 2          |
|    |              |         | E      | 1892       | 1893       | 0          |
|    |              |         | E      | 1893       | 1895       | -83        |
|    |              |         | E      | 1895       | 1897       | -22        |
|    |              |         | E      | 1897       | 1898       | 25         |
|    |              |         | E      | 1898       | 1900       | -121       |
|    |              |         | C      | 1900       | 1904       | -150       |
|    |              |         | C      | 1904       | 1905       | -1         |
|    |              |         | C      | 1905       | 1907       | 37         |
|    |              |         | C      | 1907       | 1908       | 21         |
|    |              |         | C      | 1908       | 1909       | 7          |
|    |              |         | C      | 1909       | 1910       | 30         |
|    |              |         | C      | 1910       | 1911       | 20         |
|    |              |         | C      | 1911       | 1912       | -18        |
|    |              |         | C      | 1912       | 1915       | -57        |
|    |              |         | C      | 1915       | 1918       | -6         |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | C      | 1918       | 1919       | -1         |
|    |              |         | C      | 1919       | 1920       | -12        |
|    |              |         | C      | 1920       | 1921       | -1         |
|    |              |         | C      | 1921       | 1922       | 8          |
|    |              |         | C      | 1922       | 1923       | 18         |
|    |              |         | C      | 1923       | 1924       | 43         |
|    |              |         | C      | 1924       | 1925       | 40         |
|    |              |         | C      | 1925       | 1926       | 34         |
|    |              |         | C      | 1926       | 1927       | 20         |
|    |              |         | C      | 1927       | 1928       | 20         |
|    |              |         | C      | 1928       | 1929       | 23         |
|    |              |         | C      | 1929       | 1930       | 12         |
|    |              |         | C      | 1930       | 1931       | 10         |
|    |              |         | C      | 1931       | 1932       | 7          |
|    |              |         | C      | 1932       | 1933       | 4          |
|    |              |         | C      | 1933       | 1934       | -30        |
|    |              |         | C      | 1934       | 1935       | -34        |
|    |              |         | C      | 1935       | 1936       | -31        |
|    |              |         | C      | 1936       | 1937       | -130       |
|    |              |         | C      | 1937       | 1938       | -45        |
|    |              |         | C      | 1938       | 1939       | -62        |
|    |              |         | C      | 1939       | 1940       | -43        |
|    |              |         | C      | 1940       | 1953       | -460       |
|    |              |         | C      | 1953       | 1959       | -240       |
|    |              |         | C      | 1959       | 1962       | -20        |
|    |              |         | C      | 1962       | 1970       | 0          |
|    |              |         | C      | 1970       | 1971       | -2         |
|    |              |         | C      | 1971       | 1972       | 0          |
|    |              |         | C      | 1972       | 1973       | 0          |
|    |              |         | C      | 1973       | 1974       | 0          |
|    |              |         | C      | 1974       | 1976       | 2          |
|    |              |         | C      | 1976       | 1977       | 2          |
|    |              |         | C      | 1977       | 1978       | 2          |
|    |              |         | C      | 1978       | 1980       | 2          |
|    |              |         | C      | 1980       | 1982       | 2          |
|    |              |         | C      | 1982       | 1988       | 0          |
|    |              |         | C      | 1988       | 1995       | 125        |
|    |              |         | C      | 1995       | 1996       | 19         |
|    |              |         | C      | 1996       | 1997       | 9          |
|    |              |         | C      | 1997       | 1998       | 5          |
|    |              |         | C      | 1998       | 1999       | -27        |
|    |              |         | C      | 1999       | 2000       | -1         |
|    |              |         | C      | 2000       | 2001       | -6         |
|    |              |         | C      | 2001       | 2002       | -2         |
|    |              |         | C      | 2002       | 2003       | -38        |
|    |              |         | C      | 2003       | 2004       | -90        |
|    |              |         | C      | 2004       | 2005       | 27         |
| 30 | LODALSBREEN  | NO31019 | E      | 1750       | 1819       | -518       |
|    |              |         | E      | 1819       | 1822       | -25        |
|    |              |         | E      | 1822       | 1845       | -107       |
|    |              |         | E      | 1845       | 1864       | -187       |
|    |              |         | E      | 1864       | 1869       | 0          |
|    |              |         | E      | 1869       | 1870       | 25         |
|    |              |         | E      | 1870       | 1899       | -380       |
|    |              |         | C      | 1899       | 1903       | -74        |
|    |              |         | C      | 1903       | 1907       | -72        |
|    |              |         | C      | 1907       | 1908       | -22        |
|    |              |         | C      | 1908       | 1909       | -27        |
|    |              |         | C      | 1909       | 1910       | -21        |
|    |              |         | C      | 1910       | 1911       | -14        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | C      | 1911       | 1912       | -15        |
|    |              |         | C      | 1912       | 1913       | -22        |
|    |              |         | C      | 1913       | 1914       | -23        |
|    |              |         | C      | 1914       | 1915       | -21        |
|    |              |         | C      | 1915       | 1916       | -14        |
|    |              |         | C      | 1916       | 1917       | -20        |
|    |              |         | C      | 1917       | 1918       | 5          |
|    |              |         | C      | 1918       | 1919       | -8         |
|    |              |         | C      | 1919       | 1920       | -15        |
|    |              |         | C      | 1920       | 1921       | -15        |
|    |              |         | C      | 1921       | 1922       | -21        |
|    |              |         | C      | 1922       | 1923       | -19        |
|    |              |         | C      | 1923       | 1924       | -18        |
|    |              |         | C      | 1924       | 1925       | -2         |
|    |              |         | C      | 1925       | 1926       | 9          |
|    |              |         | C      | 1926       | 1927       | -33        |
|    |              |         | C      | 1927       | 1928       | 16         |
|    |              |         | C      | 1928       | 1929       | 7          |
|    |              |         | C      | 1929       | 1930       | -28        |
|    |              |         | C      | 1930       | 1931       | -21        |
|    |              |         | C      | 1931       | 1932       | 4          |
|    |              |         | C      | 1932       | 1933       | -15        |
|    |              |         | C      | 1933       | 1934       | -32        |
|    |              |         | C      | 1934       | 1935       | -14        |
|    |              |         | C      | 1935       | 1936       | -23        |
|    |              |         | C      | 1936       | 1937       | -16        |
|    |              |         | C      | 1937       | 1938       | 12         |
|    |              |         | C      | 1938       | 1939       | -52        |
|    |              |         | C      | 1939       | 1940       | -22        |
|    |              |         | C      | 1940       | 1941       | -22        |
|    |              |         | C      | 1941       | 1942       | -35        |
|    |              |         | C      | 1942       | 1943       | -34        |
|    |              |         | C      | 1943       | 1944       | -15        |
|    |              |         | C      | 1944       | 1945       | -29        |
|    |              |         | C      | 1945       | 1946       | -65        |
|    |              |         | C      | 1946       | 1947       | -34        |
|    |              |         | C      | 1947       | 1948       | -32        |
|    |              |         | C      | 1948       | 1949       | -52        |
|    |              |         | C      | 1949       | 1950       | -46        |
|    |              |         | C      | 1950       | 1951       | -31        |
|    |              |         | C      | 1951       | 1952       | -29        |
|    |              |         | C      | 1952       | 1953       | -35        |
|    |              |         | C      | 1953       | 1954       | -30        |
|    |              |         | C      | 1954       | 1955       | -54        |
|    |              |         | C      | 1955       | 1956       | -52        |
|    |              |         | C      | 1956       | 1957       | -27        |
|    |              |         | C      | 1957       | 1958       | -47        |
|    |              |         | C      | 1958       | 1959       | -48        |
|    |              |         | C      | 1959       | 1960       | -56        |
|    |              |         | C      | 1960       | 1961       | -51        |
|    |              |         | C      | 1961       | 1962       | -7         |
|    |              |         | C      | 1962       | 1963       | -35        |
|    |              |         | C      | 1963       | 1964       | -50        |
|    |              |         | C      | 1964       | 1965       | -120       |
|    |              |         | C      | 1965       | 1966       | -145       |
|    |              |         | C      | 1966       | 1967       | -93        |
|    |              |         | C      | 1967       | 1968       | -131       |
|    |              |         | C      | 1968       | 1969       | -127       |
|    |              |         | C      | 1969       | 1970       | -116       |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
| 31 | NIGARDSBREEN | NO31014 | E      | 1675       | 1710       | 1150       |
|    |              |         | E      | 1710       | 1735       | 2800       |
|    |              |         | E      | 1735       | 1742       | 0          |
|    |              |         | E      | 1742       | 1743       | 100        |
|    |              |         | E      | 1743       | 1748       | 50         |
|    |              |         | E      | 1748       | 1819       | -540       |
|    |              |         | E      | 1819       | 1822       | -75        |
|    |              |         | E      | 1822       | 1830       | 27         |
|    |              |         | E      | 1830       | 1839       | 51         |
|    |              |         | E      | 1839       | 1843       | -113       |
|    |              |         | E      | 1843       | 1845       | -50        |
|    |              |         | E      | 1845       | 1863       | -610       |
|    |              |         | E      | 1863       | 1867       | -143       |
|    |              |         | E      | 1867       | 1868       | 15         |
|    |              |         | E      | 1868       | 1873       | 38         |
|    |              |         | E      | 1873       | 1874       | -25        |
|    |              |         | E      | 1874       | 1890       | -195       |
|    |              |         | E      | 1890       | 1896       | -255       |
|    |              |         | E      | 1896       | 1899       | -132       |
|    |              |         | C      | 1899       | 1903       | -73        |
|    |              |         | C      | 1903       | 1907       | 8          |
|    |              |         | C      | 1907       | 1908       | -10        |
|    |              |         | C      | 1908       | 1909       | 18         |
|    |              |         | C      | 1909       | 1910       | -31        |
|    |              |         | C      | 1910       | 1911       | 5          |
|    |              |         | C      | 1911       | 1912       | -40        |
|    |              |         | C      | 1912       | 1913       | -11        |
|    |              |         | C      | 1913       | 1914       | -13        |
|    |              |         | C      | 1914       | 1915       | -25        |
|    |              |         | C      | 1915       | 1916       | -20        |
|    |              |         | C      | 1916       | 1917       | -19        |
|    |              |         | C      | 1917       | 1918       | -16        |
|    |              |         | C      | 1918       | 1919       | -21        |
|    |              |         | C      | 1919       | 1920       | -14        |
|    |              |         | C      | 1920       | 1921       | -16        |
|    |              |         | C      | 1921       | 1922       | 7          |
|    |              |         | C      | 1922       | 1923       | -23        |
|    |              |         | C      | 1923       | 1924       | -13        |
|    |              |         | C      | 1924       | 1925       | 10         |
|    |              |         | C      | 1925       | 1926       | 16         |
|    |              |         | C      | 1926       | 1927       | -16        |
|    |              |         | C      | 1927       | 1928       | 12         |
|    |              |         | C      | 1928       | 1929       | 20         |
|    |              |         | C      | 1929       | 1930       | 6          |
|    |              |         | C      | 1930       | 1931       | -9         |
|    |              |         | C      | 1931       | 1932       | -15        |
|    |              |         | C      | 1932       | 1933       | -15        |
|    |              |         | C      | 1933       | 1934       | -45        |
|    |              |         | C      | 1934       | 1935       | -25        |
|    |              |         | C      | 1935       | 1936       | 5          |
|    |              |         | C      | 1936       | 1937       | -17        |
|    |              |         | C      | 1937       | 1938       | -21        |
|    |              |         | C      | 1938       | 1939       | -50        |
|    |              |         | C      | 1939       | 1940       | -28        |
|    |              |         | C      | 1940       | 1941       | -41        |
|    |              |         | C      | 1941       | 1942       | -19        |
|    |              |         | C      | 1942       | 1943       | -38        |
|    |              |         | C      | 1943       | 1944       | -10        |
|    |              |         | C      | 1944       | 1945       | -43        |
|    |              |         | C      | 1945       | 1946       | -35        |
|    |              |         | C      | 1946       | 1947       | -113       |

| NR | GLACIER NAME       | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------------|---------|--------|------------|------------|------------|
|    |                    |         |        | D M Y      | D M Y      | IN METERS  |
|    |                    |         | C      | 1947       | 1948       | -145       |
|    |                    |         | C      | 1948       | 1949       | -92        |
|    |                    |         | C      | 1949       | 1950       | -47        |
|    |                    |         | C      | 1950       | 1951       | -56        |
|    |                    |         | C      | 1951       | 1952       | -87        |
|    |                    |         | C      | 1952       | 1953       | -60        |
|    |                    |         | C      | 1953       | 1954       | -41        |
|    |                    |         | C      | 1954       | 1955       | -72        |
|    |                    |         | C      | 1955       | 1956       | -53        |
|    |                    |         | C      | 1956       | 1957       | -34        |
|    |                    |         | C      | 1957       | 1958       | -49        |
|    |                    |         | C      | 1958       | 1959       | -66        |
|    |                    |         | C      | 1959       | 1960       | -87        |
|    |                    |         | C      | 1960       | 1961       | -55        |
|    |                    |         | C      | 1961       | 1962       | -30        |
|    |                    |         | C      | 1962       | 1963       | -65        |
|    |                    |         | C      | 1963       | 1964       | -65        |
|    |                    |         | C      | 1964       | 1972       | -515       |
|    |                    |         | C      | 1972       | 1973       | -65        |
|    |                    |         | C      | 1973       | 1974       | -46        |
|    |                    |         | C      | 1974       | 1975       | -16        |
|    |                    |         | C      | 1975       | 1976       | -1         |
|    |                    |         | C      | 1976       | 1978       | -14        |
|    |                    |         | C      | 1978       | 1979       | 3          |
|    |                    |         | C      | 1979       | 1980       | 1          |
|    |                    |         | C      | 1980       | 1981       | -11        |
|    |                    |         | C      | 1981       | 1982       | 4          |
|    |                    |         | C      | 1982       | 1983       | -6         |
|    |                    |         | C      | 1983       | 1984       | -2         |
|    |                    |         | C      | 1984       | 1985       | -4         |
|    |                    |         | C      | 1985       | 1986       | -7         |
|    |                    |         | C      | 1986       | 1987       | 11         |
|    |                    |         | C      | 1987       | 1988       | -18        |
|    |                    |         | C      | 1988       | 1989       | 1          |
|    |                    |         | C      | 1989       | 1990       | 7          |
|    |                    |         | C      | 1990       | 1991       | 10         |
|    |                    |         | C      | 1991       | 1992       | 21         |
|    |                    |         | C      | 1992       | 1993       | 14         |
|    |                    |         | C      | 1993       | 1994       | 36         |
|    |                    |         | C      | 1994       | 1995       | 50         |
|    |                    |         | C      | 1995       | 1996       | 40         |
|    |                    |         | C      | 1996       | 1997       | 19         |
|    |                    |         | C      | 1997       | 1998       | 23         |
|    |                    |         | C      | 1998       | 1999       | 17         |
|    |                    |         | C      | 1999       | 2000       | 23         |
|    |                    |         | C      | 2000       | 2001       | -4         |
|    |                    |         | C      | 2001       | 2002       | -1         |
|    |                    |         | C      | 2002       | 2003       | 24         |
|    |                    |         | C      | 2003       | 2004       | -25        |
|    |                    |         | C      | 2004       | 2005       | -8         |
|    | <u>SWITZERLAND</u> |         |        |            |            |            |
| 32 | OB.GRINDELWALD     | CH0057  | E      | 1590       | 1593       | 100        |
|    |                    |         | E      | 1593       | 1600       | 0          |
|    |                    |         | E      | 1600       | 1602       | 0          |
|    |                    |         | E      | 1602       | 1620       | 0          |
|    |                    |         | E      | 1620       | 1640       | -100       |
|    |                    |         | E      | 1640       | 1669       | -450       |
|    |                    |         | E      | 1669       | 1686       | 140        |
|    |                    |         | E      | 1686       | 1700       | 0          |
|    |                    |         | E      | 1700       | 1703       | 0          |
|    |                    |         | E      | 1703       | 1706       | 80         |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1706       | 1720       | 220        |
|    |              |         | E      | 1720       | 1734       | -350       |
|    |              |         | E      | 1734       | 1768       | 0          |
|    |              |         | E      | 1768       | 1773       | 250        |
|    |              |         | E      | 1773       | 1776       | 100        |
|    |              |         | E      | 1776       | 1777       | 50         |
|    |              |         | E      | 1777       | 1778       | 0          |
|    |              |         | E      | 1778       | 1786       | -200       |
|    |              |         | E      | 1786       | 1792       | -150       |
|    |              |         | E      | 1792       | 1803       | -70        |
|    |              |         | E      | 1803       | 1810       | 140        |
|    |              |         | E      | 1810       | 1813       | 65         |
|    |              |         | E      | 1813       | 1815       | 75         |
|    |              |         | E      | 1815       | 1820       | 170        |
|    |              |         | E      | 1820       | 1822       | 0          |
|    |              |         | E      | 1822       | 1826       | -10        |
|    |              |         | E      | 1826       | 1832       | -90        |
|    |              |         | E      | 1832       | 1838       | 30         |
|    |              |         | E      | 1838       | 1840       | 30         |
|    |              |         | E      | 1840       | 1854       | 10         |
|    |              |         | E      | 1854       | 1855       | 0          |
|    |              |         | E      | 1855       | 1856       | -10        |
|    |              |         | E      | 1856       | 1862       | -225       |
|    |              |         | E      | 1862       | 1868       | -175       |
|    |              |         | E      | 1868       | 1877       | -290       |
|    |              |         | E      | 1877       | 1881       | 10         |
|    |              |         | E      | 1881       | 1893       | -80        |
|    |              |         | E      | 1893       | 1894       | 51         |
|    |              |         | E      | 1894       | 1895       | 10         |
|    |              |         | E      | 1895       | 1896       | -3         |
|    |              |         | E      | 1896       | 1897       | 24         |
|    |              |         | E      | 1897       | 1898       | 5          |
|    |              |         | E      | 1898       | 1899       | -3         |
|    |              |         | E      | 1899       | 1900       | 12         |
|    |              |         | E      | 1900       | 1901       | -6         |
|    |              |         | E      | 1901       | 1902       | 0          |
|    |              |         | E      | 1902       | 1903       | 18         |
|    |              |         | E      | 1903       | 1904       | -12        |
|    |              |         | E      | 1904       | 1905       | -32        |
|    |              |         | E      | 1905       | 1906       | -13        |
|    |              |         | E      | 1906       | 1907       | -43        |
|    |              |         | E      | 1907       | 1908       | -34        |
|    |              |         | E      | 1908       | 1909       | -16        |
|    |              |         | E      | 1909       | 1910       | -11        |
|    |              |         | E      | 1910       | 1911       | 0          |
|    |              |         | E      | 1911       | 1912       | 20         |
|    |              |         | E      | 1912       | 1913       | 17         |
|    |              |         | E      | 1913       | 1914       | 38         |
|    |              |         | E      | 1914       | 1916       | 62         |
|    |              |         | E      | 1916       | 1917       | 30         |
|    |              |         | E      | 1917       | 1918       | 63         |
|    |              |         | E      | 1918       | 1919       | 20         |
|    |              |         | E      | 1919       | 1920       | 45         |
|    |              |         | E      | 1920       | 1921       | 13         |
|    |              |         | E      | 1921       | 1922       | 5          |
|    |              |         | E      | 1922       | 1923       | 2          |
|    |              |         | E      | 1923       | 1924       | -2         |
|    |              |         | E      | 1924       | 1925       | -15        |
|    |              |         | E      | 1925       | 1926       | -10        |
|    |              |         | E      | 1926       | 1927       | -6         |
|    |              |         | E      | 1927       | 1928       | -10        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1928       | 1929       | -10        |
|    |              |         | E      | 1929       | 1930       | -41        |
|    |              |         | E      | 1930       | 1931       | -19        |
|    |              |         | E      | 1931       | 1932       | -29        |
|    |              |         | E      | 1932       | 1933       | -12        |
|    |              |         | E      | 1933       | 1935       | -68        |
|    |              |         | E      | 1935       | 1936       | -14        |
|    |              |         | E      | 1936       | 1937       | -17        |
|    |              |         | E      | 1937       | 1938       | -30        |
|    |              |         | E      | 1938       | 1942       | -38        |
|    |              |         | E      | 1942       | 1943       | -4         |
|    |              |         | E      | 1943       | 1945       | -24        |
|    |              |         | E      | 1945       | 1946       | -6         |
|    |              |         | E      | 1946       | 1947       | -23        |
|    |              |         | E      | 1947       | 1948       | -6         |
|    |              |         | E      | 1948       | 1950       | -51        |
|    |              |         | E      | 1950       | 1951       | 0          |
|    |              |         | E      | 1951       | 1953       | -67        |
|    |              |         | E      | 1953       | 1954       | -11        |
|    |              |         | E      | 1954       | 1959       | -142       |
|    |              |         | E      | 1959       | 1960       | 9          |
|    |              |         | E      | 1960       | 1961       | 16         |
|    |              |         | E      | 1961       | 1962       | -4         |
|    |              |         | E      | 1962       | 1963       | 11         |
|    |              |         | E      | 1963       | 1964       | 4          |
|    |              |         | E      | 1964       | 1965       | 10         |
|    |              |         | E      | 1965       | 1966       | 15         |
|    |              |         | E      | 1966       | 1967       | 30         |
|    |              |         | E      | 1967       | 1968       | 30         |
|    |              |         | E      | 1968       | 1969       | 25         |
|    |              |         | E      | 1969       | 1970       | 40         |
|    |              |         | E      | 1970       | 1971       | 50         |
|    |              |         | E      | 1971       | 1972       | 68         |
|    |              |         | E      | 1972       | 1973       | 40         |
|    |              |         | E      | 1973       | 1974       | 35         |
|    |              |         | E      | 1974       | 1975       | 17         |
|    |              |         | E      | 1975       | 1976       | 0          |
|    |              |         | E      | 1976       | 1977       | 12         |
|    |              |         | E      | 1977       | 1978       | 6          |
|    |              |         | E      | 1978       | 1979       | 7          |
|    |              |         | E      | 1979       | 1980       | 7          |
| 33 | RHONE        | CH0001  | E      | 1760       | 1770       | -400       |
|    |              |         | E      | 1770       | 1772       | 190        |
|    |              |         | E      | 1772       | 1777       | 610        |
|    |              |         | E      | 1777       | 1781       | 65         |
|    |              |         | E      | 1781       | 1788       | -290       |
|    |              |         | E      | 1788       | 1806       | -105       |
|    |              |         | E      | 1806       | 1810       | -140       |
|    |              |         | E      | 1810       | 1815       | 185        |
|    |              |         | E      | 1815       | 1817       | 140        |
|    |              |         | E      | 1817       | 1818       | 90         |
|    |              |         | E      | 1818       | 1824       | -45        |
|    |              |         | E      | 1824       | 1826       | -20        |
|    |              |         | E      | 1826       | 1830       | -20        |
|    |              |         | E      | 1830       | 1833       | 30         |
|    |              |         | E      | 1833       | 1834       | -5         |
|    |              |         | E      | 1834       | 1848       | 135        |
|    |              |         | E      | 1848       | 1849       | -10        |
|    |              |         | E      | 1849       | 1851       | 5          |
|    |              |         | E      | 1851       | 1856       | 15         |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1856       | 1861       | -85        |
|    |              |         | E      | 1861       | 1870       | -235       |
|    |              |         | E      | 1870       | 1871       | -20        |
|    |              |         | E      | 1871       | 1874       | -278       |
|    |              |         | E      | 1874       | 1875       | -82        |
|    |              |         | E      | 1875       | 1876       | -50        |
|    |              |         | E      | 1876       | 1877       | -70        |
|    |              |         | E      | 1877       | 1878       | -5         |
|    |              |         | E      | 1878       | 1879       | -15        |
|    |              |         | E      | 1879       | 1880       | -55        |
|    |              |         | E      | 1880       | 1881       | -68        |
|    |              |         | E      | 1881       | 1882       | -77        |
|    |              |         | E      | 1882       | 1883       | -20        |
|    |              |         | E      | 1883       | 1884       | -90        |
|    |              |         | E      | 1884       | 1885       | -5         |
|    |              |         | E      | 1885       | 1886       | -15        |
|    |              |         | E      | 1886       | 1887       | -28        |
|    |              |         | E      | 1887       | 1888       | -32        |
|    |              |         | E      | 1888       | 1889       | -20        |
|    |              |         | E      | 1889       | 1890       | -12        |
|    |              |         | E      | 1890       | 1891       | -10        |
|    |              |         | E      | 1891       | 1892       | -3         |
|    |              |         | E      | 1892       | 1893       | -5         |
|    |              |         | E      | 1893       | 1894       | -20        |
|    |              |         | E      | 1894       | 1895       | -21        |
|    |              |         | E      | 1895       | 1896       | -9         |
|    |              |         | E      | 1896       | 1897       | -15        |
|    |              |         | E      | 1897       | 1898       | -5         |
|    |              |         | E      | 1898       | 1899       | -10        |
|    |              |         | E      | 1899       | 1900       | -10        |
|    |              |         | E      | 1900       | 1901       | -16        |
|    |              |         | E      | 1901       | 1902       | -13        |
|    |              |         | E      | 1902       | 1903       | -12        |
|    |              |         | E      | 1903       | 1904       | -8         |
|    |              |         | E      | 1904       | 1905       | -22        |
|    |              |         | E      | 1905       | 1906       | -16        |
|    |              |         | E      | 1906       | 1907       | -25        |
|    |              |         | E      | 1907       | 1908       | -29        |
|    |              |         | E      | 1908       | 1909       | -21        |
|    |              |         | E      | 1909       | 1910       | -13        |
|    |              |         | E      | 1910       | 1911       | -10        |
|    |              |         | E      | 1911       | 1912       | -11        |
|    |              |         | E      | 1912       | 1913       | 14         |
|    |              |         | E      | 1913       | 1915       | 22         |
|    |              |         | E      | 1915       | 1916       | 15         |
|    |              |         | E      | 1916       | 1917       | 4          |
|    |              |         | E      | 1917       | 1918       | 15         |
|    |              |         | E      | 1918       | 1919       | 33         |
|    |              |         | E      | 1919       | 1920       | 12         |
|    |              |         | E      | 1920       | 1921       | 22         |
|    |              |         | E      | 1921       | 1922       | -28        |
|    |              |         | E      | 1922       | 1923       | -9         |
|    |              |         | E      | 1923       | 1924       | -3         |
|    |              |         | E      | 1924       | 1925       | -12        |
|    |              |         | E      | 1925       | 1926       | 4          |
|    |              |         | E      | 1926       | 1927       | 6          |
|    |              |         | E      | 1927       | 1928       | -6         |
|    |              |         | E      | 1928       | 1929       | -5         |
|    |              |         | E      | 1929       | 1930       | -20        |
|    |              |         | E      | 1930       | 1931       | -16        |
|    |              |         | E      | 1931       | 1932       | -16        |



| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1932       | 1933       | -9         |
|    |              |         | E      | 1933       | 1934       | -25        |
|    |              |         | E      | 1934       | 1935       | -17        |
|    |              |         | E      | 1935       | 1936       | -10        |
|    |              |         | E      | 1936       | 1937       | 0          |
|    |              |         | E      | 1937       | 1938       | -5         |
|    |              |         | E      | 1938       | 1939       | -7         |
|    |              |         | E      | 1939       | 1940       | 7          |
|    |              |         | E      | 1940       | 1941       | 14         |
|    |              |         | E      | 1941       | 1942       | -10        |
|    |              |         | E      | 1942       | 1943       | -10        |
|    |              |         | E      | 1943       | 1944       | -135       |
|    |              |         | E      | 1944       | 1945       | -15        |
|    |              |         | E      | 1945       | 1946       | -30        |
|    |              |         | E      | 1946       | 1947       | -80        |
|    |              |         | E      | 1947       | 1948       | -30        |
|    |              |         | E      | 1948       | 1949       | -22        |
|    |              |         | E      | 1949       | 1950       | -20        |
|    |              |         | E      | 1950       | 1951       | -7         |
|    |              |         | E      | 1951       | 1952       | 0          |
|    |              |         | E      | 1952       | 1953       | 0          |
|    |              |         | E      | 1953       | 1954       | 0          |
|    |              |         | E      | 1954       | 1955       | 0          |
|    |              |         | E      | 1955       | 1956       | 0          |
|    |              |         | E      | 1956       | 1957       | -9         |
|    |              |         | E      | 1957       | 1958       | -2         |
|    |              |         | E      | 1958       | 1959       | -8         |
|    |              |         | E      | 1959       | 1960       | -7         |
|    |              |         | E      | 1960       | 1961       | -4         |
|    |              |         | E      | 1961       | 1962       | -3         |
|    |              |         | E      | 1962       | 1963       | -86        |
|    |              |         | E      | 1963       | 1964       | -6         |
|    |              |         | E      | 1964       | 1965       | -12        |
|    |              |         | E      | 1965       | 1966       | 11         |
|    |              |         | E      | 1966       | 1967       | -5         |
|    |              |         | E      | 1967       | 1968       | -11        |
|    |              |         | E      | 1968       | 1969       | 6          |
|    |              |         | E      | 1969       | 1970       | 0          |
|    |              |         | E      | 1970       | 1971       | 7          |
|    |              |         | E      | 1971       | 1972       | -10        |
|    |              |         | E      | 1972       | 1973       | -5         |
|    |              |         | E      | 1973       | 1974       | 3          |
|    |              |         | E      | 1974       | 1975       | 17         |
|    |              |         | E      | 1975       | 1976       | -18        |
|    |              |         | E      | 1976       | 1977       | 15         |
|    |              |         | E      | 1977       | 1978       | 7          |
|    |              |         | E      | 1978       | 1979       | -3         |
|    |              |         | E      | 1979       | 1980       | 16         |
|    |              |         | E      | 1980       | 1981       | 0          |
|    |              |         | E      | 1981       | 1982       | -5         |
|    |              |         | E      | 1982       | 1983       | -1         |
|    |              |         | E      | 1983       | 1984       | -2         |
|    |              |         | E      | 1984       | 1985       | -1         |
|    |              |         | E      | 1985       | 1986       | 1          |
|    |              |         | E      | 1986       | 1987       | 9          |
|    |              |         | E      | 1987       | 1988       | -19        |
| 34 | ROSENLAUI    | CH0056  | E      | 1760       | 1774       | 110        |
|    |              |         | E      | 1774       | 1777       | 30         |
|    |              |         | E      | 1777       | 1782       | -130       |
|    |              |         | E      | 1782       | 1797       | -220       |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1797       | 1800       | 140        |
|    |              |         | E      | 1800       | 1815       | -80        |
|    |              |         | E      | 1815       | 1824       | 320        |
|    |              |         | E      | 1824       | 1827       | 0          |
|    |              |         | E      | 1827       | 1828       | 0          |
|    |              |         | E      | 1828       | 1833       | -50        |
|    |              |         | E      | 1833       | 1835       | -10        |
|    |              |         | E      | 1835       | 1846       | 20         |
|    |              |         | E      | 1846       | 1848       | -40        |
|    |              |         | E      | 1848       | 1856       | 20         |
|    |              |         | E      | 1856       | 1857       | 0          |
|    |              |         | E      | 1857       | 1860       | -50        |
|    |              |         | E      | 1860       | 1863       | -110       |
|    |              |         | E      | 1863       | 1864       | -20        |
|    |              |         | E      | 1864       | 1867       | -60        |
|    |              |         | E      | 1867       | 1874       | -190       |
|    |              |         | E      | 1874       | 1880       | -30        |
|    |              |         | E      | 1880       | 1882       | 61         |
|    |              |         | E      | 1882       | 1883       | 24         |
|    |              |         | E      | 1883       | 1884       | 30         |
|    |              |         | E      | 1884       | 1886       | 45         |
|    |              |         | E      | 1886       | 1887       | 0          |
|    |              |         | E      | 1887       | 1888       | 0          |
|    |              |         | E      | 1888       | 1889       | 0          |
|    |              |         | E      | 1889       | 1890       | 0          |
|    |              |         | E      | 1890       | 1891       | 10         |
|    |              |         | E      | 1891       | 1893       | -34        |
|    |              |         | E      | 1893       | 1894       | -6         |
|    |              |         | E      | 1894       | 1895       | -23        |
|    |              |         | E      | 1895       | 1896       | -8         |
|    |              |         | E      | 1896       | 1897       | 25         |
|    |              |         | E      | 1897       | 1898       | 10         |
|    |              |         | E      | 1898       | 1899       | -2         |
|    |              |         | E      | 1899       | 1900       | -40        |
|    |              |         | E      | 1900       | 1915       | -222       |
|    |              |         | E      | 1915       | 1918       | -20        |
|    |              |         | E      | 1918       | 1923       | 130        |
|    |              |         | E      | 1923       | 1924       | -10        |
|    |              |         | E      | 1924       | 1925       | -6         |
|    |              |         | E      | 1925       | 1926       | 0          |
|    |              |         | E      | 1926       | 1927       | -10        |
|    |              |         | E      | 1927       | 1928       | -15        |
|    |              |         | E      | 1928       | 1929       | -13        |
|    |              |         | E      | 1929       | 1930       | -9         |
|    |              |         | E      | 1930       | 1931       | -18        |
|    |              |         | E      | 1931       | 1932       | -12        |
|    |              |         | E      | 1932       | 1933       | -12        |
|    |              |         | E      | 1933       | 1934       | -10        |
|    |              |         | E      | 1934       | 1935       | -23        |
|    |              |         | E      | 1935       | 1936       | -10        |
|    |              |         | E      | 1936       | 1937       | -11        |
|    |              |         | E      | 1937       | 1938       | -8         |
|    |              |         | E      | 1938       | 1960       | -343       |
|    |              |         | E      | 1960       | 1961       | 9          |
|    |              |         | E      | 1961       | 1962       | 6          |
|    |              |         | E      | 1962       | 1963       | 12         |
|    |              |         | E      | 1963       | 1965       | 18         |
|    |              |         | E      | 1965       | 1966       | 25         |
|    |              |         | E      | 1966       | 1967       | 12         |
|    |              |         | E      | 1967       | 1968       | 1          |
|    |              |         | E      | 1968       | 1969       | 7          |

| NR | GLACIER NAME    | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|-----------------|---------|--------|------------|------------|------------|
|    |                 |         |        | D M Y      | D M Y      | IN METERS  |
| 35 | UNT.GRINDELWALD | CH0058  | E      | 1969       | 1972       | 30         |
|    |                 |         | E      | 1972       | 1973       | -5         |
|    |                 |         | E      | 1973       | 1974       | -15        |
|    |                 |         | E      | 1974       | 1978       | 0          |
|    |                 |         | E      | 1978       | 1982       | 40         |
|    |                 |         | E      | 1982       | 1983       | -10        |
|    |                 |         | E      | 1983       | 1986       | 30         |
|    |                 |         | E      | 1986       | 1987       | 0          |
|    |                 |         | E      | 1987       | 1988       | -10        |
|    |                 |         | E      | 1535       | 1540       | -200       |
|    |                 |         | E      | 1540       | 1547       | 350        |
|    |                 |         | E      | 1547       | 1552       | -30        |
|    |                 |         | E      | 1552       | 1565       | -550       |
|    |                 |         | E      | 1565       | 1577       | 0          |
|    |                 |         | E      | 1577       | 1588       | 630        |
|    |                 |         | E      | 1588       | 1593       | 200        |
|    |                 |         | E      | 1593       | 1597       | 30         |
|    |                 |         | E      | 1597       | 1600       | 20         |
|    |                 |         | E      | 1600       | 1606       | 0          |
|    |                 |         | E      | 1606       | 1611       | -30        |
|    |                 |         | E      | 1611       | 1628       | -120       |
|    |                 |         | E      | 1628       | 1636       | 150        |
|    |                 |         | E      | 1636       | 1641       | 0          |
|    |                 |         | E      | 1641       | 1645       | 0          |
|    |                 |         | E      | 1645       | 1650       | -30        |
|    |                 |         | E      | 1650       | 1662       | -360       |
|    |                 |         | E      | 1662       | 1669       | 140        |
|    |                 |         | E      | 1669       | 1670       | 20         |
|    |                 |         | E      | 1670       | 1675       | -30        |
|    |                 |         | E      | 1675       | 1686       | -330       |
|    |                 |         | E      | 1686       | 1705       | 140        |
|    |                 |         | E      | 1705       | 1708       | 0          |
|    |                 |         | E      | 1708       | 1719       | 150        |
|    |                 |         | E      | 1719       | 1724       | -30        |
|    |                 |         | E      | 1724       | 1732       | -260       |
|    |                 |         | E      | 1732       | 1743       | 190        |
|    |                 |         | E      | 1743       | 1748       | -200       |
|    |                 |         | E      | 1748       | 1762       | 20         |
|    |                 |         | E      | 1762       | 1766       | -40        |
|    |                 |         | E      | 1766       | 1768       | 20         |
|    |                 |         | E      | 1768       | 1770       | 60         |
|    |                 |         | E      | 1770       | 1774       | 140        |
|    |                 |         | E      | 1774       | 1776       | 100        |
|    |                 |         | E      | 1776       | 1777       | 120        |
|    |                 |         | E      | 1777       | 1778       | 0          |
|    |                 |         | E      | 1778       | 1783       | -30        |
|    |                 |         | E      | 1783       | 1785       | -140       |
|    |                 |         | E      | 1785       | 1786       | -40        |
|    |                 |         | E      | 1786       | 1788       | -20        |
|    |                 |         | E      | 1788       | 1794       | -180       |
|    |                 |         | E      | 1794       | 1802       | 30         |
|    |                 |         | E      | 1802       | 1808       | -80        |
|    |                 |         | E      | 1808       | 1810       | 50         |
|    |                 |         | E      | 1810       | 1814       | -10        |
|    |                 |         | E      | 1814       | 1815       | 20         |
|    |                 |         | E      | 1815       | 1816       | 100        |
|    |                 |         | E      | 1816       | 1819       | 170        |
|    |                 |         | E      | 1819       | 1820       | 160        |
|    |                 |         | E      | 1820       | 1826       | 0          |
|    |                 |         | E      | 1826       | 1830       | -20        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1830       | 1835       | 20         |
|    |              |         | E      | 1835       | 1839       | 0          |
|    |              |         | E      | 1839       | 1841       | 0          |
|    |              |         | E      | 1841       | 1843       | 20         |
|    |              |         | E      | 1843       | 1855       | 100        |
|    |              |         | E      | 1855       | 1856       | 0          |
|    |              |         | E      | 1856       | 1860       | -20        |
|    |              |         | E      | 1860       | 1867       | -510       |
|    |              |         | E      | 1867       | 1868       | -20        |
|    |              |         | E      | 1868       | 1869       | -60        |
|    |              |         | E      | 1869       | 1871       | -50        |
|    |              |         | E      | 1871       | 1879       | -180       |
|    |              |         | E      | 1879       | 1880       | -70        |
|    |              |         | E      | 1880       | 1882       | -100       |
|    |              |         | E      | 1882       | 1883       | 20         |
|    |              |         | E      | 1883       | 1884       | 0          |
|    |              |         | E      | 1884       | 1886       | 0          |
|    |              |         | E      | 1886       | 1887       | 0          |
|    |              |         | E      | 1887       | 1890       | 0          |
|    |              |         | E      | 1890       | 1891       | 0          |
|    |              |         | E      | 1891       | 1892       | 0          |
|    |              |         | E      | 1892       | 1893       | 190        |
|    |              |         | E      | 1893       | 1894       | -10        |
|    |              |         | E      | 1894       | 1895       | 0          |
|    |              |         | E      | 1895       | 1896       | 0          |
|    |              |         | E      | 1896       | 1897       | 0          |
|    |              |         | E      | 1897       | 1898       | 0          |
|    |              |         | E      | 1898       | 1899       | -20        |
|    |              |         | E      | 1899       | 1900       | -90        |
|    |              |         | E      | 1900       | 1901       | -30        |
|    |              |         | E      | 1901       | 1902       | 0          |
|    |              |         | E      | 1902       | 1903       | -30        |
|    |              |         | E      | 1903       | 1904       | 0          |
|    |              |         | E      | 1904       | 1905       | -50        |
|    |              |         | E      | 1905       | 1906       | -60        |
|    |              |         | E      | 1906       | 1907       | 20         |
|    |              |         | E      | 1907       | 1908       | 20         |
|    |              |         | E      | 1908       | 1909       | 10         |
|    |              |         | E      | 1909       | 1910       | 20         |
|    |              |         | E      | 1910       | 1911       | -40        |
|    |              |         | E      | 1911       | 1912       | 20         |
|    |              |         | E      | 1912       | 1913       | 10         |
|    |              |         | E      | 1913       | 1914       | 10         |
|    |              |         | E      | 1914       | 1916       | -40        |
|    |              |         | E      | 1916       | 1917       | -75        |
|    |              |         | E      | 1917       | 1918       | 10         |
|    |              |         | E      | 1918       | 1919       | 10         |
|    |              |         | E      | 1919       | 1920       | 10         |
|    |              |         | E      | 1920       | 1921       | 25         |
|    |              |         | E      | 1921       | 1922       | 35         |
|    |              |         | E      | 1922       | 1923       | 25         |
|    |              |         | E      | 1923       | 1924       | 60         |
|    |              |         | E      | 1924       | 1925       | 75         |
|    |              |         | E      | 1925       | 1926       | 15         |
|    |              |         | E      | 1926       | 1927       | -40        |
|    |              |         | E      | 1927       | 1928       | -70        |
|    |              |         | E      | 1928       | 1929       | -20        |
|    |              |         | E      | 1929       | 1930       | -10        |
|    |              |         | E      | 1930       | 1931       | 5          |
|    |              |         | E      | 1931       | 1932       | 5          |
|    |              |         | E      | 1932       | 1933       | 0          |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1933       | 1935       | -30        |
|    |              |         | E      | 1935       | 1936       | 5          |
|    |              |         | E      | 1936       | 1937       | -5         |
|    |              |         | E      | 1937       | 1939       | -30        |
|    |              |         | E      | 1939       | 1942       | -45        |
|    |              |         | E      | 1942       | 1943       | -10        |
|    |              |         | E      | 1943       | 1944       | -10        |
|    |              |         | E      | 1944       | 1945       | -15        |
|    |              |         | E      | 1945       | 1946       | -25        |
|    |              |         | E      | 1946       | 1947       | -35        |
|    |              |         | E      | 1947       | 1948       | -25        |
|    |              |         | E      | 1948       | 1949       | -15        |
|    |              |         | E      | 1949       | 1951       | -45        |
|    |              |         | E      | 1951       | 1952       | -15        |
|    |              |         | E      | 1952       | 1953       | -70        |
|    |              |         | E      | 1953       | 1954       | -45        |
|    |              |         | E      | 1954       | 1955       | -30        |
|    |              |         | E      | 1955       | 1956       | -15        |
|    |              |         | E      | 1956       | 1957       | -15        |
|    |              |         | E      | 1957       | 1958       | -20        |
|    |              |         | E      | 1958       | 1959       | -40        |
|    |              |         | E      | 1959       | 1960       | -5         |
|    |              |         | E      | 1960       | 1961       | -10        |
|    |              |         | E      | 1961       | 1962       | -55        |
|    |              |         | E      | 1962       | 1963       | -45        |
|    |              |         | E      | 1963       | 1964       | -25        |
|    |              |         | E      | 1964       | 1965       | -10        |
|    |              |         | E      | 1965       | 1966       | -20        |
|    |              |         | E      | 1966       | 1967       | -20        |
|    |              |         | E      | 1967       | 1968       | -10        |
|    |              |         | E      | 1968       | 1969       | -5         |
|    |              |         | E      | 1969       | 1970       | -20        |
|    |              |         | E      | 1970       | 1971       | -30        |
|    |              |         | E      | 1971       | 1973       | -30        |
|    |              |         | E      | 1973       | 1975       | -35        |
|    |              |         | E      | 1975       | 1976       | -5         |
|    |              |         | E      | 1976       | 1977       | -10        |
|    |              |         | E      | 1977       | 1978       | 80         |
|    |              |         | E      | 1978       | 1979       | 0          |
|    |              |         | E      | 1979       | 1980       | 120        |
|    |              |         | E      | 1980       | 1981       | 50         |
|    |              |         | E      | 1981       | 1982       | -60        |
|    |              |         | E      | 1982       | 1983       | -65        |
|    |              |         | E      | 1983       | 2000       | -25        |
|    |              |         | E      | 2000       | 2004       | -50        |
| 36 | UNTERAAR     | CH0051  | E      | 1719       | 1729       | 0          |
|    |              |         | E      | 1729       | 1758       | 150        |
|    |              |         | E      | 1758       | 1810       | 575        |
|    |              |         | E      | 1810       | 1824       | 185        |
|    |              |         | E      | 1824       | 1828       | 10         |
|    |              |         | E      | 1828       | 1829       | 10         |
|    |              |         | E      | 1829       | 1842       | 100        |
|    |              |         | E      | 1842       | 1851       | 30         |
|    |              |         | E      | 1851       | 1852       | 0          |
|    |              |         | E      | 1852       | 1854       | 20         |
|    |              |         | E      | 1854       | 1861       | 40         |
|    |              |         | E      | 1861       | 1871       | 30         |
|    |              |         | E      | 1871       | 1875       | -25        |
|    |              |         | E      | 1875       | 1880       | -35        |
|    |              |         | E      | 1880       | 1884       | -45        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1884       | 1886       | 23         |
|    |              |         | E      | 1886       | 1889       | 0          |
|    |              |         | E      | 1889       | 1890       | -8         |
|    |              |         | E      | 1890       | 1893       | -197       |
|    |              |         | E      | 1893       | 1894       | -2         |
|    |              |         | E      | 1894       | 1895       | -30        |
|    |              |         | E      | 1895       | 1896       | -14        |
|    |              |         | E      | 1896       | 1897       | -3         |
|    |              |         | E      | 1897       | 1898       | -25        |
|    |              |         | E      | 1898       | 1899       | -14        |
|    |              |         | E      | 1899       | 1900       | -25        |
|    |              |         | E      | 1900       | 1901       | -8         |
|    |              |         | E      | 1901       | 1902       | -14        |
|    |              |         | E      | 1902       | 1903       | -14        |
|    |              |         | E      | 1903       | 1904       | -6         |
|    |              |         | E      | 1904       | 1905       | -8         |
|    |              |         | E      | 1905       | 1906       | -3         |
|    |              |         | E      | 1906       | 1907       | -7         |
|    |              |         | E      | 1907       | 1908       | -29        |
|    |              |         | E      | 1908       | 1909       | -1         |
|    |              |         | E      | 1909       | 1910       | -9         |
|    |              |         | E      | 1910       | 1911       | -10        |
|    |              |         | E      | 1911       | 1912       | 4          |
|    |              |         | E      | 1912       | 1913       | -14        |
|    |              |         | E      | 1913       | 1914       | -8         |
|    |              |         | E      | 1914       | 1915       | -12        |
|    |              |         | E      | 1915       | 1916       | -11        |
|    |              |         | E      | 1916       | 1917       | -7         |
|    |              |         | E      | 1917       | 1918       | -7         |
|    |              |         | E      | 1918       | 1919       | -8         |
|    |              |         | E      | 1919       | 1920       | -8         |
|    |              |         | E      | 1920       | 1921       | -14        |
|    |              |         | E      | 1921       | 1922       | -14        |
|    |              |         | E      | 1922       | 1923       | -14        |
|    |              |         | E      | 1923       | 1924       | -14        |
|    |              |         | E      | 1924       | 1925       | -7         |
|    |              |         | E      | 1925       | 1926       | -7         |
|    |              |         | E      | 1926       | 1927       | -16        |
|    |              |         | E      | 1927       | 1928       | -10        |
|    |              |         | E      | 1928       | 1929       | -12        |
|    |              |         | E      | 1929       | 1930       | -14        |
|    |              |         | E      | 1930       | 1931       | -13        |
|    |              |         | E      | 1931       | 1932       | -12        |
|    |              |         | E      | 1932       | 1933       | -54        |
|    |              |         | E      | 1933       | 1934       | -67        |
|    |              |         | E      | 1934       | 1935       | -43        |
|    |              |         | E      | 1935       | 1936       | -41        |
|    |              |         | E      | 1936       | 1937       | -40        |
|    |              |         | E      | 1937       | 1938       | -30        |
|    |              |         | E      | 1938       | 1939       | -26        |
|    |              |         | E      | 1939       | 1940       | -14        |
|    |              |         | E      | 1940       | 1941       | -26        |
|    |              |         | E      | 1941       | 1942       | -11        |
|    |              |         | E      | 1942       | 1943       | -29        |
|    |              |         | E      | 1943       | 1944       | -26        |
|    |              |         | E      | 1944       | 1945       | -10        |
|    |              |         | E      | 1945       | 1946       | -11        |
|    |              |         | E      | 1946       | 1947       | -17        |
|    |              |         | E      | 1947       | 1948       | -23        |
|    |              |         | E      | 1948       | 1949       | -23        |
|    |              |         | E      | 1949       | 1950       | -12        |

| NR | GLACIER NAME | PSFG NR | METHOD | 1ST SURVEY | 2ND SURVEY | VARIATIONS |
|----|--------------|---------|--------|------------|------------|------------|
|    |              |         |        | D M Y      | D M Y      | IN METERS  |
|    |              |         | E      | 1950       | 1951       | -10        |
|    |              |         | E      | 1951       | 1952       | -26        |
|    |              |         | E      | 1952       | 1953       | -11        |
|    |              |         | E      | 1953       | 1954       | -17        |
|    |              |         | E      | 1954       | 1955       | -13        |
|    |              |         | E      | 1955       | 1956       | 0          |
|    |              |         | E      | 1956       | 1957       | -5         |
|    |              |         | E      | 1957       | 1958       | -2         |
|    |              |         | E      | 1958       | 1959       | -6         |
|    |              |         | E      | 1959       | 1960       | -15        |
|    |              |         | E      | 1960       | 1961       | -10        |
|    |              |         | E      | 1961       | 1962       | -11        |
|    |              |         | E      | 1962       | 1963       | -18        |
|    |              |         | E      | 1963       | 1964       | -13        |
|    |              |         | E      | 1964       | 1965       | -19        |
|    |              |         | E      | 1965       | 1966       | -17        |
|    |              |         | E      | 1966       | 1967       | -21        |
|    |              |         | E      | 1967       | 1968       | -15        |
|    |              |         | E      | 1968       | 1969       | -13        |
|    |              |         | E      | 1969       | 1970       | -7         |
|    |              |         | E      | 1970       | 1971       | -7         |
|    |              |         | E      | 1971       | 1972       | -13        |
|    |              |         | E      | 1972       | 1973       | -11        |
|    |              |         | E      | 1973       | 1974       | -14        |
|    |              |         | E      | 1974       | 1975       | -14        |
|    |              |         | E      | 1975       | 1976       | -17        |
|    |              |         | E      | 1976       | 1977       | -9         |
|    |              |         | E      | 1977       | 1978       | -33        |
|    |              |         | E      | 1978       | 1979       | -14        |
|    |              |         | E      | 1979       | 1980       | -8         |
|    |              |         | E      | 1980       | 1981       | -27        |
|    |              |         | E      | 1981       | 1982       | -12        |
|    |              |         | E      | 1982       | 1983       | -27        |
|    |              |         | E      | 1983       | 1984       | -18        |
|    |              |         | E      | 1984       | 1985       | -17        |
|    |              |         | E      | 1985       | 1986       | -24        |
|    |              |         | E      | 1986       | 1987       | -11        |
|    |              |         | E      | 1987       | 1988       | -10        |





|   |
|---|
| <p>WORLD GLACIER MONITORING SERVICE</p> <p><b>MASS BALANCE STUDY RESULTS</b></p> <p><b>SUMMARY DATA 2005–2010</b></p> |
|---|

TABLE C

|              |   |
|--------------|---|
| NR           | Record number   |
| GLACIER NAME | 15 alphabetic or numeric digits   |
| PSFG NUMBER  | 5 digits identifying glacier with alphabetic prefix denoting country  |
| SYS          | System of measurement: FLO = floating-date system<br>FXD = fixed-date system<br>STR = stratigraphic system<br>COM = combined system; usually of STR and FXD according to Mayo et al. (1972)<br>OTH = Other System |
| FROM         | Day, month and year of beginning of balance/measurement year  |
| TO           | Day, month and year of end of balance/measurement year  |
| BW           | Specific winter balance in mm water equivalent  |
| BS           | Specific summer balance in mm water equivalent  |
| BA           | Specific annual balance in mm water equivalent  |
| ELA          | Altitude of equilibrium line or annual equilibrium line in meters above sea level   |
| AAR          | Ratio of accumulation area to total area of the glacier in percent  |
| AREA         | Area (in square kilometers) of the glacier used for calculation of specific quantities  |

| NR         | GLACIER NAME       | PSFG NR    | SYS       | FROM        | TO         | BW   | BS         | BA         | ELA   | AAR   | AREA  |      |    |       |
|------------|--------------------|------------|-----------|-------------|------------|------|------------|------------|-------|-------|-------|------|----|-------|
|            |                    |            |           | D M Y       | D M Y      | MM   | MM         | MM         | M     | %     | KMP   |      |    |       |
| ANTARCTICA |                    |            |           |             |            |      |            |            |       |       |       |      |    |       |
| 1          | BAHIA DEL DIABLO   | AQ         | COM       | 01.03.2005  | 28.02.2006 |      |            | -580       | 445   | 31    | 14.3  |      |    |       |
|            |                    |            | COM       | 01.03.2006  | 28.02.2007 |      |            | -80        | 360   | 49    | 14.3  |      |    |       |
|            |                    |            | COM       | 01.03.2007  | 29.02.2008 |      |            | -530       | 430   | 33    | 14.3  |      |    |       |
|            |                    |            | COM       | 01.03.2008  | 28.02.2009 |      |            | -255       | 395   | 43    | 14.3  |      |    |       |
| 2          | HURD               | AQ         | COM       | 01.03.2009  | 28.02.2010 |      |            | 370        | 75    | 100   | 14.3  |      |    |       |
|            |                    |            | COM       | 18.02.2005  | 22.02.2006 | 560  | -1420      | -860       | 280   | 20    | 4.034 |      |    |       |
|            |                    |            | COM       | 23.02.2006  | 23.02.2007 | 350  | -890       | -540       | 280   | 22    | 4.034 |      |    |       |
|            |                    |            | COM       | 24.02.2007  | 20.02.2008 | 820  | -630       | 190        | 185   | 69    | 4.034 |      |    |       |
| 3          | JOHNSONS           | AQ         | COM       | 21.02.2008  | 10.02.2009 | 510  | -900       | -390       | 250   | 34    | 4.034 |      |    |       |
|            |                    |            | COM       | 11.02.2009  | 25.02.2010 | 740  | -200       | 540        | 160   | 77    | 4.034 |      |    |       |
|            |                    |            | COM       | 18.02.2005  | 22.02.2006 | 850  | -1180      | -330       | 225   | 43    | 5.358 |      |    |       |
|            |                    |            | COM       | 23.02.2006  | 23.02.2007 | 440  | -730       | -290       | 220   | 42    | 5.358 |      |    |       |
| 4          |                    |            | COM       | 24.02.2007  | 20.02.2008 | 780  | -690       | 90         | 180   | 67    | 5.358 |      |    |       |
|            |                    |            | COM       | 21.02.2008  | 10.02.2009 | 640  | -810       | -170       | 210   | 37    | 5.358 |      |    |       |
|            |                    |            | COM       | 11.02.2009  | 28.02.2010 | 740  | -230       | 510        | 130   | 93    | 5.358 |      |    |       |
|            |                    |            | ARGENTINA |             |            |      |            |            |       |       |       |      |    |       |
| 4          | MARTIAL ESTE       | AR         | FXD       | 2005        | 2006       | 797  | -1310      | -513       | 1096  | 38    | 0.093 |      |    |       |
|            |                    |            | FXD       | 2006        | 2007       | 1053 | -954       | 99         | 1072  | 62    | 0.093 |      |    |       |
|            |                    |            | FXD       | 2007        | 2008       | 1505 | -1561      | -56        | 1074  | 56    | 0.093 |      |    |       |
|            |                    |            | FXD       | 2008        | 2009       | 1061 | -1180      | -119       | 1078  | 51    | 0.093 |      |    |       |
| 5          |                    |            | FXD       | 2009        | 2010       | 1332 | -402       | 930        | 1015  | 92    | 0.093 |      |    |       |
|            |                    |            | AUSTRIA   |             |            |      |            |            |       |       |       |      |    |       |
|            |                    |            | 5         | GOLDBERG K. | AT0802B    | FXD  | 30.09.2005 | 01.10.2006 | 1577  | -2655 | -1077 | 3020 | 7  | 1.425 |
|            |                    |            |           |             |            | FXD  | 01.10.2006 | 30.09.2007 | 1296  | -2402 | -1106 | 3000 | 24 | 1.425 |
| COM        | 01.10.2007         | 15.10.2008 |           |             |            | 2070 | -2721      | -651       | >3050 | 20    | 1.42  |      |    |       |
| COM        | 15.10.2008         | 18.09.2009 |           |             |            | 1933 | -2475      | -542       | 2975  | 21    | 1.42  |      |    |       |
| 6          | HINTEREIS FERNER   | AT0209     | COM       | 18.09.2009  | 29.08.2010 | 1572 | -2330      | -758       | 2950  | 27    | 1.316 |      |    |       |
|            |                    |            | FXD       | 01.10.2005  | 30.09.2006 |      |            | -1516      | >3750 | 12    | 7.401 |      |    |       |
|            |                    |            | FXD       | 01.10.2006  | 30.09.2007 |      |            | -1798      | >3750 | 0     | 7.206 |      |    |       |
|            |                    |            | FXD       | 01.10.2007  | 30.09.2008 |      |            | -1235      | 3276  | 22    | 7.102 |      |    |       |
| 7          | JAMTAL F.          | AT0106     | FXD       | 01.10.2008  | 30.09.2009 |      |            | -1182      | 3257  | 25    | 6.96  |      |    |       |
|            |                    |            | FXD       | 01.10.2009  | 30.09.2010 |      |            | -820       | 3285  | 36    | 6.858 |      |    |       |
|            |                    |            | FXD       | 01.10.2005  | 30.09.2006 | 1030 | -2430      | -1290      | >3200 | 8     | 3.479 |      |    |       |
|            |                    |            | FXD       | 01.10.2006  | 30.09.2007 | 790  | -2230      | -1439      |       | 6     | 3.431 |      |    |       |
| 8          | KESSELWAND F.      | AT0226     | FXD       | 01.10.2007  | 30.09.2008 | 1480 | -2461      | -981       | >3200 | 9     | 3.314 |      |    |       |
|            |                    |            | FXD       | 03.10.2008  | 30.09.2009 | 1348 | -2301      | -953       | 3113  | 10    | 3.251 |      |    |       |
|            |                    |            | FXD       | 01.10.2009  | 30.09.2010 | 984  | -1998      | -1014      | >3200 | 9     | 3.171 |      |    |       |
|            |                    |            | FXD       | 01.10.2005  | 30.09.2006 |      |            | -617       | 3233  | 33    | 3.851 |      |    |       |
| 9          | KLEINFLEISS K.     | AT0801     | FXD       | 01.10.2006  | 30.09.2007 |      |            | -836       | 3280  | 21    | 3.815 |      |    |       |
|            |                    |            | FXD       | 01.10.2007  | 30.09.2008 |      |            | -444       | 3224  | 42    | 3.777 |      |    |       |
|            |                    |            | FXD       | 02.10.2008  | 30.09.2009 |      |            | -795       | 3252  | 28    | 3.715 |      |    |       |
|            |                    |            | FXD       | 01.10.2009  | 30.09.2010 |      |            | -99        | 3158  | 65    | 3.659 |      |    |       |
| 10         | PASTERZE           | AT0704     | FXD       | 30.09.2005  | 01.10.2006 | 1234 | -1889      | -655       | 3070  | 10    | 0.849 |      |    |       |
|            |                    |            | FXD       | 01.10.2006  | 30.09.2007 | 989  | -1935      | -946       | 3020  | 23    | 0.832 |      |    |       |
|            |                    |            | COM       | 03.10.2007  | 14.10.2008 | 1534 | -2157      | -623       | 3020  | 24    | 0.831 |      |    |       |
|            |                    |            | COM       | 14.10.2008  | 17.09.2009 | 1887 | -2290      | -403       | 2875  | 26    | 0.821 |      |    |       |
| 11         | STUB. SONNBLICK K. | AT0601A    | COM       | 17.09.2009  | 29.08.2010 | 1371 | -1587      | -216       | 2950  | 48    | 0.831 |      |    |       |
|            |                    |            | FXD       | 30.09.2005  | 01.10.2006 |      |            | -1232      | 3000  | 47    | 17.71 |      |    |       |
|            |                    |            | FXD       | 01.10.2006  | 30.09.2007 |      |            | -1355      | 3025  | 49    | 17.71 |      |    |       |
|            |                    |            | COM       | 01.10.2007  | 26.09.2008 |      |            | -1412      | >3600 | 16    | 17.71 |      |    |       |
| 12         | VERNAGT FERNER     | AT0211     | COM       | 30.09.2008  | 02.10.2009 |      |            | -1120      | 2960  | 45    | 17.71 |      |    |       |
|            |                    |            | COM       | 02.10.2009  | 15.10.2010 |      |            | -910       | 2925  | 47    | 17.71 |      |    |       |
|            |                    |            |           | 01.10.2005  | 30.10.2006 | 88   | -709       | -621       | 2860  | 29    | 1.352 |      |    |       |
|            |                    |            |           | 31.10.2006  | 02.09.2007 | 4    | -2171      | -2175      | 2990  | 2     | 1.304 |      |    |       |
| 13         |                    |            |           | 03.09.2007  | 14.09.2008 | 65   | -842       | -777       | 2890  | 23    | 1.278 |      |    |       |
|            |                    |            |           | 15.09.2008  | 10.10.2009 | 178  | -432       | -254       | 2780  | 48    | 1.252 |      |    |       |
|            |                    |            |           | 11.10.2009  | 29.08.2010 | 63   | -855       | -792       | 2900  | 23    | 1.194 |      |    |       |
|            |                    |            |           | 01.10.2005  | 30.09.2006 | 791  | -1673      | -882       | 3261  | 25    | 8.359 |      |    |       |

| NR             | GLACIER NAME        | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA   | AAR | AREA   |
|----------------|---------------------|---------|-----|------------|------------|------|-------|-------|-------|-----|--------|
|                |                     |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M     | %   | KM²    |
| 13             | WURTEN K.           | AT0804  | FXD | 01.10.2006 | 30.09.2007 | 491  | -1457 | -966  | 3281  | 19  | 8.172  |
|                |                     |         | FXD | 01.10.2007 | 30.09.2008 | 976  | -1819 | -843  | 3289  | 17  | 8.172  |
|                |                     |         | FXD | 01.10.2008 | 30.09.2009 | 1072 | -2031 | -959  | 3347  | 14  | 8.161  |
|                |                     |         | FXD | 01.10.2009 | 30.09.2010 | 146  | -927  | -680  | 3246  | 23  | 7.916  |
|                |                     |         | FXD | 30.09.2005 | 01.10.2006 | 1441 | -2218 | -778  | 3120  | 17  | 0.824  |
|                |                     |         | FXD | 01.10.2006 | 30.09.2007 | 936  | -2136 | -1201 | >3150 | 4   | 0.824  |
|                |                     |         | COM | 24.09.2007 | 24.09.2008 | 1784 | -2722 | -938  | >3100 | 15  | 0.82   |
|                |                     |         | COM | 24.09.2008 | 04.10.2009 | 2086 | -2671 | -584  | 2950  | 33  | 0.82   |
|                |                     |         | COM | 04.10.2009 | 30.08.2010 | 1366 | -1885 | -519  | >3100 | 20  | 0.77   |
| <u>BOLIVIA</u> |                     |         |     |            |            |      |       |       |       |     |        |
| 14             | CHACALTAYA          | BO5180  | OTH | 01.09.2005 | 31.08.2006 |      |       | -1199 | 5383  | 0   | 0.007  |
|                |                     |         | OTH | 01.09.2006 | 31.08.2007 |      |       | -1652 | >5400 | 0   | 0.003  |
|                |                     |         | OTH | 01.09.2007 | 31.08.2008 |      |       | -1549 | >5374 | 0   | 0.001  |
| 15             | CHARQUINI SUR       | BO      | FXD | 01.09.2005 | 31.08.2006 |      |       | -376  | 5132  | 39  | 0.363  |
|                |                     |         | FXD | 06.09.2006 | 31.08.2007 |      |       | -482  | 5157  | 38  | 0.345  |
|                |                     |         | FXD | 07.09.2007 | 31.08.2008 |      |       | 161   | 5096  | 93  | 0.339  |
|                |                     |         | FXD | 01.09.2008 | 33.08.2009 |      |       | -1617 | 5204  | 29  | 0.319  |
| 16             | ZONGO               | BO5150  | FXD | 01.09.2009 | 34.08.2010 |      |       | -2921 | 5262  | 10  | 0.319  |
|                |                     |         | FXD | 01.09.2005 | 31.08.2006 |      |       | -197  | 5191  | 71  | 1.881  |
|                |                     |         | FXD | 01.09.2006 | 31.08.2007 |      |       | -173  | 5271  | 64  | 1.871  |
|                |                     |         | FXD | 01.09.2007 | 31.08.2008 |      |       | 257   | 5148  | 77  | 1.871  |
|                |                     |         | FXD | 01.09.2008 | 31.08.2009 |      |       | -44   | 5364  | 65  | 1.926  |
|                |                     |         | FXD | 01.09.2009 | 32.08.2010 |      |       | -64   | 5383  | 64  | 1.91   |
| <u>CANADA</u>  |                     |         |     |            |            |      |       |       |       |     |        |
| 17             | DEVON ICE CAP NW    | CA0431  | STR | 23.05.2005 | 27.04.2006 | 151  | -386  | -242  | 1230  |     | 1667.6 |
|                |                     |         | STR | 27.04.2006 | 11.05.2007 | 86   | -385  | -294  | 1320  |     | 1667.6 |
|                |                     |         | STR | 11.05.2007 | 21.05.2008 | 89   | -665  | -577  | 1570  |     | 1667.6 |
|                |                     |         | STR | 21.05.2008 | 09.05.2009 | 126  | -649  | -523  | 1520  |     | 1667.6 |
|                |                     |         | STR | 09.05.2009 | 28.04.2010 | 118  | -534  | -417  | 1465  |     | 1667.6 |
| 18             | HELM                | CA0855  | COM | 24.04.2006 | 21.09.2006 |      |       | -2750 | >2179 | 0   |        |
|                |                     |         | COM | 20.04.2007 | 14.09.2007 |      |       | -210  | 2007  | 12  |        |
|                |                     |         |     | 2007       | 2008       |      |       | -2300 | 2125  | 2   |        |
|                |                     |         |     | 2008       | 2009       |      |       | -510  | 2010  | 12  |        |
|                |                     |         |     | 2009       | 2010       |      |       | -190  | 1950  | 33  |        |
| 19             | MEIGHEN ICE CAP     | CA1335  | STR | 16.04.2005 | 16.04.2006 | 172  | -180  | -8    |       |     | 75     |
|                |                     |         | STR | 16.04.2006 | 23.04.2007 | 146  | -642  | -518  |       |     | 75     |
|                |                     |         | STR | 23.04.2007 | 13.04.2008 | 106  | -811  | -705  |       |     | 75     |
|                |                     |         | STR | 13.04.2008 | 23.04.2009 | 137  | -812  | -676  |       |     | 75     |
|                |                     |         | STR | 23.04.2009 | 15.04.2010 | 154  | -541  | -387  |       |     | 75     |
| 20             | PEYTO               | CA1640  | COM | 18.04.2006 | 14.09.2006 |      |       | -1650 | 3090  | 10  |        |
|                |                     |         | COM | 13.05.2007 | 27.09.2007 |      |       | -1850 | 3010  | 40  |        |
|                |                     |         |     | 2007       | 2008       |      |       | -230  | 2620  | 41  |        |
|                |                     |         |     | 2008       | 2009       |      |       | -1020 | 2750  | 18  |        |
|                |                     |         |     | 2009       | 2010       |      |       | -340  | 2675  | 44  |        |
| 21             | PLACE               | CA1660  | COM | 22.04.2006 | 22.09.2006 |      |       | -1900 | >2610 | 0   |        |
|                |                     |         | COM | 21.04.2007 | 15.09.2007 |      |       | -150  | 2180  | 26  |        |
|                |                     |         |     | 2007       | 2008       |      |       | -490  | 2060  | 40  |        |
|                |                     |         |     | 2008       | 2009       |      |       | -1500 | 2340  | 5   |        |
|                |                     |         |     | 2009       | 2010       |      |       | 80    | 2060  | 45  |        |
| 22             | S. MELVILLE ICE CAP | CA      |     | 21.04.2005 | 01.05.2006 | 271  | -612  | -360  |       |     | 51     |
|                |                     |         |     | 01.05.2006 | 21.04.2007 | 144  | -1225 | -1182 |       |     | 51     |
|                |                     |         |     | 21.04.2007 | 09.04.2008 | 93   | -999  | -905  |       |     | 51     |
|                |                     |         |     | 09.04.2008 | 18.04.2009 | 157  | -512  | -351  |       |     | 51     |
|                |                     |         |     | 18.04.2009 | 08.04.2010 | 170  | -1102 | -939  |       |     | 51     |
| 23             | WHITE               | CA2340  | COM | 2005       | 2006       |      |       | -93   | 1097  | 61  | 39.38  |
|                |                     |         | COM | 2006       | 2007       |      |       | -818  | 1347  | 25  | 39.38  |
|                |                     |         |     | 2007       | 2008       |      |       | -817  | 1399  | 17  |        |
|                |                     |         |     | 2008       | 2009       |      |       | -580  | 1335  | 29  | 39.38  |
|                |                     |         |     | 2009       | 2010       |      |       | -188  |       |     |        |

| NR              | GLACIER NAME       | PSFG NR | SYS | FROM<br>D M Y | TO<br>D M Y | BW<br>MM | BS<br>MM | BA<br>MM | ELA<br>M | AAR<br>% | AREA<br>KM² |
|-----------------|--------------------|---------|-----|---------------|-------------|----------|----------|----------|----------|----------|-------------|
| <u>CHILE</u>    |                    |         |     |               |             |          |          |          |          |          |             |
| 24              | ECHAURREN NORTE    | CL0001B |     | 01.04.2005    | 31.03.2006  | 3590     | -3110    | 480      |          |          |             |
|                 |                    |         |     | 01.04.2006    | 31.03.2007  | 2590     | -2720    | -130     |          |          |             |
|                 |                    |         |     | 01.04.2007    | 31.03.2008  | 1970     | -2510    | -540     |          |          |             |
|                 |                    |         |     | 01.04.2008    | 31.03.2009  | 3200     | -3120    | 80       |          |          |             |
|                 |                    |         |     | 01.04.2009    | 31.03.2010  | 1900     | -4010    | -2110    |          |          |             |
| <u>CHINA</u>    |                    |         |     |               |             |          |          |          |          |          |             |
| 25              | URUMQI G. NO. 1    | CN0010  | FXD | 01.09.2005    | 31.08.2006  |          |          | -774     | 4087     | 28       | 1.677       |
|                 |                    |         | FXD | 01.09.2006    | 31.08.2007  |          |          | -642     | 4074     | 31       | 1.677       |
|                 |                    |         | FXD | 30.08.2007    | 08.09.2008  | 121      | -1052    | -931     | 4168     | 17       | 1.677       |
|                 |                    |         | FXD | 09.09.2008    | 17.09.2009  | 254      | -191     | 63       | 3990     | 64       | 1.645       |
|                 |                    |         | FXD | 17.09.2009    | 07.09.2010  | 102      | -1429    | -1327    | >4484    | 0        | 1.645       |
| 26              | URUMQI NO.1 E-BR.  | CN0001  | FXD | 01.09.2005    | 31.08.2006  |          |          | -920     | 4086     | 19       | 1.086       |
|                 |                    |         | FXD | 01.09.2006    | 31.08.2007  |          |          | -696     | 4060     | 28       | 1.086       |
|                 |                    |         | FXD | 30.08.2007    | 08.09.2008  | 84       | -1130    | -1046    | 4152     | 10       | 1.086       |
|                 |                    |         | FXD | 09.09.2008    | 17.09.2009  | 269      | -326     | -57      | 3975     | 56       | 1.068       |
|                 |                    |         | FXD | 17.09.2009    | 07.09.2010  | 105      | -1546    | -1441    | >4267    | 0        | 1.068       |
| 27              | URUMQI NO.1 W-BR.  | CN0002  | FXD | 01.09.2005    | 31.08.2006  |          |          | -506     | 4089     | 43       | 0.591       |
|                 |                    |         | FXD | 01.09.2006    | 31.08.2007  |          |          | -542     | 4100     | 36       | 0.591       |
|                 |                    |         | FXD | 30.08.2007    | 08.09.2008  | 190      | -909     | -719     | 4184     | 31       | 0.591       |
|                 |                    |         | FXD | 09.09.2008    | 17.09.2009  | 236      | 53       | 289      | 4010     | 81       | 0.577       |
|                 |                    |         | FXD | 17.09.2009    | 07.09.2010  | 97       | -1213    | -1116    | >4484    | 0        | 0.577       |
| <u>C.I.S.</u>   |                    |         |     |               |             |          |          |          |          |          |             |
| 28              | DJANKUAT           | SU3010  | COM | 03.10.2005    | 12.10.2006  | 2290     | -3090    | -800     | 3290     | 42       | 2.737       |
|                 |                    |         | COM | 12.10.2006    | 19.10.2007  | 1950     | 3960     | -2010    | 3500     | 16       | 2.688       |
|                 |                    |         |     | 2007          | 2008        |          |          | 100      |          |          |             |
|                 |                    |         |     | 2008          | 2009        | 2750     | -2870    | -120     |          |          |             |
|                 |                    |         |     | 2009          | 2010        |          |          | -600     |          |          |             |
| 29              | GARABASHI          | SU3031  | STR | 2005          | 2006        | 1230     | -1890    | -660     | 3950     | 40       | 4.422       |
|                 |                    |         | STR | 2006          | 2007        | 940      | -1570    | -630     | 3910     | 42       | 4.422       |
|                 |                    |         | STR | 2007          | 2008        | 1170     | -1590    | -420     | 3870     | 50       | 4.422       |
|                 |                    |         | STR | 2008          | 2009        | 900      | -1270    | -370     | 3860     | 52       | 4.422       |
|                 |                    |         | STR | 2009          | 2010        | 1160     | -2400    | -1240    | 3950     | 40       | 4.422       |
| 30              | LEVIY AKTRU        | SU7102  | STR | 2005          | 2006        |          |          | -190     | 3230     | 58       |             |
|                 |                    |         | STR | 2006          | 2007        |          |          | -320     | 3250     | 57       |             |
|                 |                    |         | STR | 2007          | 2008        |          |          | -810     | 3340     | 48       |             |
|                 |                    |         | STR | 2008          | 2009        |          |          | 470      | 3050     | 67       |             |
| 31              | MALIY AKTRU        | SU7100  | STR | 2005          | 2006        |          |          | -140     | 3250     | 60       |             |
|                 |                    |         | STR | 2006          | 2007        |          |          | -340     | 3270     | 55       |             |
|                 |                    |         | STR | 2007          | 2008        |          |          | -870     | 3360     | 34       |             |
|                 |                    |         | STR | 2008          | 2009        | 1210     | -620     | 590      | 3040     | 82       |             |
| 32              | NO. 125 (VODOPAD.) | SU7105  | STR | 2005          | 2006        |          |          | -260     | 3240     | 67       |             |
|                 |                    |         | STR | 2006          | 2007        |          |          | -280     | 3240     | 67       |             |
|                 |                    |         | STR | 2007          | 2008        |          |          | -720     |          | 8        |             |
|                 |                    |         | STR | 2008          | 2009        |          |          | 380      | 3120     | 85       |             |
| 33              | TS.TUYUKSUYSKIY    | SU5075  | STR | 18.09.2005    | 14.09.2006  | 687      | -1656    | -969     | 3980     | 22       | 2.513       |
|                 |                    |         | STR | 14.09.2006    | 23.09.2007  | 538      | -1453    | -915     | 3885     | 34       | 2.472       |
|                 |                    |         | STR | 23.09.2007    | 20.09.2008  | 411      | -1768    | -1357    | 3980     | 22       | 451         |
|                 |                    |         |     | 2008          | 2009        |          |          | 206      | 3710     | 66       |             |
|                 |                    |         |     | 31.08.2009    | 02.10.2010  | 887      | -855     | 32       | 3762     | 55       | 2.446       |
| <u>COLOMBIA</u> |                    |         |     |               |             |          |          |          |          |          |             |
| 34              | LA CONEJERA        | CO0033  | FXD | 01.04.2006    | 31.12.2006  |          |          | -1936    | 4914     | 12       |             |
|                 |                    |         | FXD | 01.01.2007    | 31.12.2007  |          |          | -995     | 4816     | 23       |             |
|                 |                    |         | FXD | 01.01.2008    | 31.12.2008  |          |          | 1557     | 4741     | 42       |             |
|                 |                    |         | FXD | 01.01.2009    | 31.12.2009  |          |          | -653     | 4858     | 23       | 0.221       |
|                 |                    |         | FXD | 01.01.2010    | 31.12.2010  |          |          | -757     | 4881     | 23       | 0.22        |
| 35              | LOS RITACUBAS      | CO      |     | 2006          | 2007        |          |          | -2227    |          |          |             |

| NR               | GLACIER NAME     | PSFG NR | SYS | FROM<br>D M Y            | TO<br>D M Y              | BW<br>MM | BS<br>MM | BA<br>MM    | ELA<br>M     | AAR<br>% | AREA<br>KM² |
|------------------|------------------|---------|-----|--------------------------|--------------------------|----------|----------|-------------|--------------|----------|-------------|
|                  |                  |         |     | 99.99.2008<br>99.99.2009 | 99.99.2009<br>99.99.2010 |          |          | 1884<br>-98 | 4875<br>4981 | 90<br>30 |             |
| <u>ECUADOR</u>   |                  |         |     |                          |                          |          |          |             |              |          |             |
| 36               | ANTIZANA15ALPHA  | EC0001  | FXD | 31.12.2005               | 31.12.2006               |          |          | -203        | 5150         | 54       | 0.292       |
|                  |                  |         | FXD | 31.12.2006               | 31.12.2007               |          |          | -66         | 5170         | 53       | 0.286       |
|                  |                  |         | FXD | 31.12.2007               | 31.12.2008               |          |          | 337         | 4985         | 85       |             |
|                  |                  |         | FXD | 31.12.2008               | 31.12.2009               |          |          | -828        | 5200         | 54       | 0.292       |
|                  |                  |         | FXD | 31.12.2009               | 31.12.2010               |          |          | -77         | <5215        | 54       | 0.293       |
| <u>FRANCE</u>    |                  |         |     |                          |                          |          |          |             |              |          |             |
| 37               | ARGENTIERE       | FR0002  | STR | 30.09.2005               | 04.10.2006               |          |          | -1420       |              |          |             |
|                  |                  |         | STR | 04.10.2006               | 21.10.2007               |          |          | -590        |              |          |             |
|                  |                  |         | STR | 21.10.2007               | 10.10.2008               |          |          | -1320       |              |          |             |
|                  |                  |         | STR | 10.10.2008               | 14.10.2009               |          |          | -2650       |              |          |             |
|                  |                  |         | STR | 14.10.2009               | 06.10.2010               |          |          | -540        |              |          |             |
| 38               | GEBROULAZ        | FR0009  | STR | 20.09.2005               | 21.09.2006               |          |          | -1000       |              |          |             |
|                  |                  |         | STR | 21.09.2006               | 05.10.2007               |          |          | -910        |              |          |             |
|                  |                  |         | STR | 05.10.2007               | 12.10.2008               |          |          | -1050       |              |          |             |
|                  |                  |         | STR | 12.10.2008               | 13.10.2009               |          |          | -1970       |              |          |             |
|                  |                  |         | STR | 13.10.2009               | 06.10.2010               |          |          | -340        |              |          |             |
| 39               | OSSOUE           | FR      | STR | 25.09.2005               | 08.10.2006               | 1950     | -4660    | -2710       | >3200        | 0        |             |
|                  |                  |         | STR | 08.10.2006               | 20.10.2007               | 2660     | -4040    | -1380       | >3200        | 0        |             |
|                  |                  |         | STR | 20.10.2007               | 12.10.2008               | 3230     | -3350    | -120        | 3150         | 43       |             |
|                  |                  |         | STR | 12.10.2008               | 12.10.2009               | 3150     | -4780    | -1630       | >3200        | 0        |             |
|                  |                  |         | STR | 12.10.2009               | 09.10.2010               | 3010     | -3490    | -480        |              | 35       |             |
| 40               | SAINT SORLIN     | FR0015  | STR | 11.10.2005               | 28.09.2006               |          |          | -1440       |              |          |             |
|                  |                  |         | STR | 28.09.2006               | 17.10.2007               |          |          | -2250       |              |          |             |
|                  |                  |         | STR | 17.10.2007               | 14.10.2008               |          |          | -1810       |              |          |             |
|                  |                  |         | STR | 14.10.2008               | 19.10.2009               |          |          | -2650       |              |          |             |
|                  |                  |         | STR | 19.10.2009               | 01.10.2010               |          |          | -1000       |              |          |             |
| 41               | SARENNES         | FR0029  | STR | 24.10.2005               | 31.10.2006               | 1820     | -4200    | -2380       |              |          |             |
|                  |                  |         | STR | 31.10.2006               | 22.10.2007               | 1240     | -3760    | -2520       |              |          |             |
|                  |                  |         | STR | 22.10.2007               | 26.10.2008               | 1700     | -4040    | -2340       |              |          |             |
|                  |                  |         | STR | 26.10.2008               | 19.10.2009               | 1130     | -5030    | -3900       |              |          |             |
|                  |                  |         | STR | 19.10.2009               | 23.10.2010               | 1730     | -3260    | -1530       |              |          |             |
| <u>GREENLAND</u> |                  |         |     |                          |                          |          |          |             |              |          |             |
| 42               | FREYA            | GL      | COM | 11.08.2007               | 23.08.2008               | 686      | -1196    | -510        | 1030         | 14       | 5.599       |
|                  |                  |         | COM | 23.08.2008               | 24.08.2009               |          |          | -466        | 830          | 41       | 5.599       |
|                  |                  |         | COM | 24.08.2009               | 21.08.2010               |          |          | -795        | 1000         | 14       | 5.599       |
| 43               | MITTIVAKKAT      | GL0019  |     | 2005                     | 2006                     | 980      | -1590    | -580        |              | 18       | 17.6        |
|                  |                  |         |     | 2006                     | 2007                     |          |          | -1580       | >899         | 0        |             |
|                  |                  |         |     | 2007                     | 2008                     | 1160     | -1690    | -520        |              | 41       | 17.6        |
|                  |                  |         |     | 2008                     | 2009                     |          |          | -1010       |              | 18       | 17.6        |
|                  |                  |         |     | 2009                     | 2010                     |          |          | -2160       | >899         | 0        | 17.6        |
| <u>ICELAND</u>   |                  |         |     |                          |                          |          |          |             |              |          |             |
| 44               | BRUARJOEKULL     | IS2400  |     | 2005                     | 2006                     |          |          | -790        |              |          | 1600        |
|                  |                  |         |     | 2006                     | 2007                     |          |          | -536        |              |          | 1600        |
|                  |                  |         |     | 2007                     | 2008                     |          |          | -503        |              |          |             |
|                  |                  |         |     | 2008                     | 2009                     | 1570     | -1692    | -122        | 1225         | 59       | 1600        |
|                  |                  |         |     | 2009                     | 2010                     | 1450     | -3020    | -1570       | 1545         | 14       |             |
| 45               | DYNGJUJOEKULL    | IS2600  |     | 2005                     | 2006                     |          |          | -353        |              |          | 1050        |
|                  |                  |         |     | 2006                     | 2007                     |          |          | 95          |              |          | 1050        |
|                  |                  |         |     | 2007                     | 2008                     |          |          | -24         |              |          |             |
|                  |                  |         |     | 2008                     | 2009                     | 1687     | -1460    | 227         | 1315         | 64       | 1050        |
|                  |                  |         |     | 2009                     | 2010                     |          |          | -1540       | 1675         | 22       |             |
| 46               | EYJABAKKAJOEKULL | IS2300  |     | 2005                     | 2006                     |          |          | -1425       |              |          | 110         |
|                  |                  |         |     | 2006                     | 2007                     |          |          | -636        |              |          | 110         |
|                  |                  |         |     | 2007                     | 2008                     |          |          | -1282       |              |          |             |

| NR | GLACIER NAME      | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA   | AAR | AREA  |
|----|-------------------|---------|-----|------------|------------|------|-------|-------|-------|-----|-------|
|    |                   |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M     | %   | KM²   |
| 47 | HOFSJOEKULL E     | IS0510B |     | 2008       | 2009       | 1995 | -2502 | -507  | 1140  | 42  | 110   |
|    |                   |         |     | 2009       | 2010       | 1780 | -3530 | -1750 | 1271  | 18  |       |
|    |                   |         |     | 2005       | 2006       | 1800 | -2290 | -490  |       |     |       |
|    |                   |         |     | 2006       | 2007       | 1710 | -2580 | -870  |       |     |       |
|    |                   |         |     | 2007       | 2008       | 1840 | -2630 | -790  |       |     |       |
| 48 | HOFSJOEKULL N     | IS0510A |     | 2008       | 2009       | 1740 | -1910 | -170  | 1170  | 50  |       |
|    |                   |         |     | 2009       | 2010       | 1060 | -3890 | -2830 |       |     |       |
|    |                   |         |     | 2005       | 2006       | 1380 | -1890 | -510  | 1325  | 41  |       |
|    |                   |         |     | 2006       | 2007       | 1530 | -1920 | -390  |       |     |       |
|    |                   |         |     | 2007       | 2008       | 1740 | -2310 | -570  |       |     |       |
| 49 | HOFSJOEKULL SW    | IS0510C |     | 2008       | 2009       | 1390 | -1740 | -350  | 1280  | 49  |       |
|    |                   |         |     | 2009       | 2010       | 980  | -3380 | -2400 |       |     |       |
|    |                   |         |     | 2005       | 2006       | 1580 | -2190 | -610  | 1330  | 50  |       |
|    |                   |         |     | 2006       | 2007       | 1470 | -2330 | -860  |       |     |       |
|    |                   |         |     | 2007       | 2008       | 1590 | -2520 | -930  |       |     |       |
| 50 | KOELDUKVISLARJ.   | IS2700  |     | 2008       | 2009       | 1680 | -2030 | -350  | 1290  | 54  |       |
|    |                   |         |     | 2009       | 2010       | 1010 | -4500 | -3490 |       |     |       |
|    |                   |         |     | 2005       | 2006       |      |       | -402  |       |     | 310   |
|    |                   |         |     | 2006       | 2007       |      |       | -342  |       |     | 310   |
|    |                   |         |     | 2007       | 2008       |      |       | -587  |       |     |       |
| 51 | LANGJOEK. S. DOME | IS      |     | 2008       | 2009       | 1715 | -1849 | -134  | 1360  | 57  | 310   |
|    |                   |         |     | 2009       | 2010       | 1360 | -4230 | -2870 | 1828  | 8   |       |
|    |                   |         |     | 2005       | 2006       |      |       | -1080 |       |     | 900   |
|    |                   |         |     | 2006       | 2007       |      |       | -1412 |       |     | 900   |
|    |                   |         |     | 2007       | 2008       |      |       | -1842 |       |     |       |
| 52 | TUNGNAARJOEKULL   | IS2214  |     | 2008       | 2009       | 2024 | -2386 | -362  | 1050  | 50  | 900   |
|    |                   |         |     | 2009       | 2010       | 1110 | -4910 | -3800 | >1440 | 0   |       |
|    |                   |         |     | 2005       | 2006       |      |       | -1569 |       |     | 360   |
|    |                   |         |     | 2006       | 2007       |      |       | -997  |       |     | 360   |
|    |                   |         |     | 2007       | 2008       |      |       | -1340 |       |     |       |
| 53 | CHHOTA SHIGRI     | IN      |     | 2008       | 2009       | 1650 | -2459 | -809  | 1225  | 48  | 360   |
|    |                   |         |     | 2009       | 2010       | 1080 | -4590 | -3510 | >1680 | 0   |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
| 54 | HAMTAH            | IN      | FXD | 03.10.2005 | 30.09.2006 |      |       | -1410 | 5185  | 29  |       |
|    |                   |         |     | 2006       | 2007       |      |       | -980  |       |     |       |
|    |                   |         |     | 2007       | 2008       |      |       | -930  |       |     |       |
|    |                   |         |     | 2008       | 2009       |      |       | 130   |       |     |       |
|    |                   |         |     | 2009       | 2010       |      |       | 330   |       |     |       |
| 55 | CALDERONE         | IT1006  |     | 01.08.2005 | 30.09.2006 |      |       | -1391 |       | 12  | 3.458 |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
| 56 | CAMPO SETT.       | IT0997  |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
| 57 | CARESER           | IT0701  |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
| 58 | CARESER CENTRALE  | IT      |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
| 59 | CARESER OCC.      | IT      |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
| 60 | CARESER ORIENTALE | IT      |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |
|    |                   |         |     |            |            |      |       |       |       |     |       |

| NR                 | GLACIER NAME         | PSFG NR | SYS | FROM       | TO         | BW    | BS     | BA    | ELA   | AAR | AREA  |
|--------------------|----------------------|---------|-----|------------|------------|-------|--------|-------|-------|-----|-------|
|                    |                      |         |     | D M Y      | D M Y      | MM    | MM     | MM    | M     | %   | KM²   |
| 61                 | CIARDONEY            | IT0081  | OTH | 07.10.2007 | 24.09.2008 | 823   | -2808  | -1884 | >3274 | 0   | 2.13  |
|                    |                      |         | OTH | 24.09.2008 | 27.09.2009 | 1326  | -2602  | -1276 | >3274 | 0   | 1.696 |
|                    |                      |         | FLO | 27.09.2009 | 15.09.2010 | 1042  | -1872  | -830  | 3240  | 11  | 1.432 |
|                    |                      |         | COM | 15.09.2005 | 05.09.2006 | 784   | -2883  | -2099 | >3150 | 0   | 0.833 |
|                    |                      |         | COM | 05.09.2006 | 10.09.2007 | 980   | -2470  | -1490 | >3150 | 0   | 0.833 |
|                    |                      |         | COM | 10.09.2007 | 09.09.2008 | 1160  | -2670  | -1510 | >3150 | 0   | 0.833 |
| 62                 | FONT. BIANCA/W.B.F.. | IT0713  | COM | 09.09.2008 | 07.09.2009 | 1840  | -2330  | -490  | 3100  | 15  | 0.833 |
|                    |                      |         | COM | 07.09.2009 | 06.09.2010 | 1040  | -1870  | -830  | 3120  | 10  | 0.833 |
|                    |                      |         | FLO | 30.09.2005 | 30.09.2006 | 929   | -2682  | -1753 | >3355 | 0   | 0.538 |
|                    |                      |         | FLO | 30.09.2006 | 12.10.2007 | 616   | -2223  | -1607 | >3355 | 0   | 0.49  |
|                    |                      |         | FLO | 12.10.2007 | 07.10.2008 | 862   | -2108  | -1246 | >3355 | 0   | 0.437 |
|                    |                      |         | FLO | 07.10.2008 | 30.09.2009 | 1587  | -2209  | -622  | 3250  | 9   | 0.437 |
| 63                 | GRAND ETRET          | IT0134  | FLO | 30.09.2009 | 21.09.2010 | 1316  | -1511  | -195  | 3200  | 44  | 0.437 |
|                    |                      |         |     | 99.99.2005 | 99.99.2006 | 334   | -912   | -578  |       |     | 0.553 |
|                    |                      |         | FXD | 04.09.1999 | 16.09.2008 | 1322  | -2685  | -1363 | 3050  | 13  | 0.553 |
| 64                 | LUNGA / LANGENF..    | IT0733  | FXD | 2008       | 05.09.2009 | 2846  | -2473  | 373   |       | 76  |       |
|                    |                      |         | FXD | 01.10.2005 | 30.09.2006 | 642   | -2259  | -1460 | 3295  | 10  | 1.858 |
|                    |                      |         | FXD | 01.10.2006 | 01.10.2007 | 642   | -2259  | -1616 | >3390 | 0   | 1.858 |
|                    |                      |         | FXD | 01.10.2007 | 30.09.2008 | 849   | -2486  | -1637 | 3320  | 8   |       |
|                    |                      |         | FXD | 01.10.2008 | 30.09.2009 | 1343  | -2341  | -998  | 3285  | 16  | 1.776 |
|                    |                      |         | FXD | 30.09.2009 | 29.09.2010 | 1076  | -1735  | -659  | 3270  | 23  | 1.776 |
| 65                 | LUPO                 | IT0543  | FLO | 22.09.2009 | 22.09.2010 | 3898  | -3551  | 347   | 2540  | 65  | 0.202 |
| 66                 | MALAVALLE /UEB.T..   | IT0875  | FLO | 25.09.2005 | 23.09.2006 | 1170  | -2578  | -1408 | 3120  | 12  | 7.198 |
|                    |                      |         | FLO | 23.09.2006 | 22.09.2007 | 728   | -2066  | -1338 | 3110  | 11  | 7.198 |
|                    |                      |         | FLO | 22.09.2007 | 20.09.2008 | 1210  | -2110  | -900  | 3100  | 9   | 7.198 |
|                    |                      |         | FLO | 20.09.2008 | 03.10.2009 | 1529  | -2046  | -517  | 3050  | 38  | 7.198 |
|                    |                      |         | FLO | 03.10.2009 | 11.09.2010 | 1179  | -1376  | -197  | 3032  | 42  | 7.198 |
|                    |                      |         | FLO | 26.09.2005 | 24.09.2006 | 1517  | -3297  | -1780 | 3075  | 42  | 1.033 |
| 67                 | PENDENTE/HANGEN.     | IT0876  | FLO | 24.09.2006 | 23.09.2007 | 763   | -2917  | -2154 | 3110  | 0   | 0.993 |
|                    |                      |         | FLO | 23.09.2007 | 21.09.2008 | 1539  | -3023  | -1484 | 3104  | 0   | 0.852 |
|                    |                      |         | FLO | 21.09.2008 | 04.10.2009 | 2418  | -3262  | -844  | 2966  | 7   | 0.852 |
|                    |                      |         | FLO | 04.10.2009 | 12.09.2010 | 1703  | -1837  | -134  | 2815  | 24  | 0.852 |
|                    |                      |         | FXD | 01.10.2008 | 30.09.2009 | 1269  | -1881  | -612  | 3100  | 17  | 1.975 |
|                    |                      |         | FLO | 24.09.2009 | 06.10.2010 | 1139  | -1608  | -469  | 3075  | 21  | 1.975 |
| 69                 | SURETTA MERID.       | IT0371  | FLO | 20.09.2009 | 29.09.2010 | 2689  | -2692  | -3    | 2785  | 56  | 0.181 |
| <u>JAPAN</u>       |                      |         |     |            |            |       |        |       |       |     |       |
| 70                 | HAMAGURI YUKI        | JP0001  |     | 03.10.2005 | 01.10.2006 | 10915 | -6874  | 4041  |       |     |       |
|                    |                      |         |     | 01.10.2006 | 24.09.2007 | 10171 | -10265 | -94   |       |     |       |
|                    |                      |         |     | 24.09.2007 | 12.10.2008 | 5689  | -3714  | 1975  |       |     |       |
|                    |                      |         |     | 12.10.2008 | 04.10.2009 | 6377  | -10361 | -3984 |       |     |       |
|                    |                      |         |     | 04.10.2009 | 06.10.2010 | 8493  | -8598  | -105  |       |     |       |
| <u>NEW ZEALAND</u> |                      |         |     |            |            |       |        |       |       |     |       |
| 71                 | BREWSTER             | NZ      | COM | 21.03.2005 | 13.03.2006 | 2479  | -2197  | 282   | 1893  | 72  | 2.542 |
|                    |                      |         | COM | 13.03.2006 | 23.03.2007 | 2881  | -2583  | 297   | 1899  | 67  | 2.542 |
|                    |                      |         | COM | 23.03.2007 | 20.04.2008 | 2447  | -4100  | -1653 | >2390 | 10  | 2.541 |
|                    |                      |         | COM | 20.04.2008 | 18.03.2009 | 1914  | -2741  | -828  | 2034  | 26  | 2.541 |
| <u>NORWAY</u>      |                      |         |     |            |            |       |        |       |       |     |       |
| 72                 | AALFOTBREEN          | NO36204 |     | 2005       | 2006       | 2690  | -5880  | -3190 | >1382 | 0   | 4.5   |
|                    |                      |         |     | 2006       | 2007       | 4490  | -3220  | 1270  | 1000  | 97  | 4.5   |
|                    |                      |         |     | 2007       | 2008       | 4040  | -3350  | 680   | 1130  | 79  | 4.5   |
|                    |                      |         |     | 2008       | 2009       | 3840  | -4000  | -160  | 1240  | 48  | 4.5   |
|                    |                      |         |     | 2009       | 2010       | 2190  | -4030  | -1840 | >1368 | 0   | 3.98  |
| 73                 | AUSTDALSBREEN        | NO37323 |     | 2005       | 2006       | 1320  | -3380  | -2060 | >1757 | 0   | 11.84 |
|                    |                      |         |     | 2006       | 2007       | 2460  | -2280  | 180   | 1405  | 75  | 11.84 |
|                    |                      |         |     | 2007       | 2008       | 2550  | -2620  | -70   | 1420  | 71  | 11.84 |
|                    |                      |         |     | 2008       | 2009       | 1920  | -2620  | -700  | 1475  | 56  | 10.63 |
|                    |                      |         |     | 2009       | 2010       | 1030  | -3030  | -2000 | >1747 | 0   | 10.63 |
| 74                 | AUST. BROEGGERBR.    | NO15504 | COM | 07.05.2006 | 22.09.2006 | 619   | -1344  | -725  | 458   | 5   | 6.12  |

| NR | GLACIER NAME    | PSFG NR | SYS | FROM<br>D M Y | TO<br>D M Y | BW<br>MM | BS<br>MM | BA<br>MM | ELA<br>M | AAR<br>% | AREA<br>KM² |
|----|-----------------|---------|-----|---------------|-------------|----------|----------|----------|----------|----------|-------------|
|    |                 |         | COM | 14.04.2007    | 19.09.2007  | 621      | -1078    | -457     | 427      | 10       | 6.12        |
|    |                 |         | COM | 06.05.2008    | 16.09.2008  | 719      | -846     | -127     | 341      | 25       | 6.12        |
|    |                 |         | COM | 29.04.2009    | 14.09.2009  |          |          | -250     | 389      | 16       |             |
|    |                 |         |     | 2009          | 2010        |          |          | -440     | 403      | 13       |             |
| 75 | BLOMSTOELSK.BR. | NO      |     | 2006          | 2007        | 4170     | -2300    | 1880     | 1230     | 89       | 22.8        |
|    |                 |         |     | 2007          | 2008        | 3440     | -2140    | 1300     | 1265     | 85       | 22.45       |
|    |                 |         |     | 2008          | 2009        | 3590     | -2520    | 1070     | 1290     | 84       | 22.77       |
|    |                 |         |     | 2009          | 2010        | 1850     | -3070    | -1230    | >1636    | 0        | 22.8        |
| 76 | BREIDABLIKKBREA | NO      |     | 2005          | 2006        | 1490     | -4440    | -2950    | >1659    | 0        | 3.61        |
|    |                 |         |     | 2006          | 2007        | 3420     | -3070    | 360      | 1400     | 70       | 3.6         |
|    |                 |         |     | 2007          | 2008        | 2660     | -2960    | -300     | 1515     | 44       | 3.37        |
|    |                 |         |     | 2008          | 2009        | 2470     | -2980    | -520     | 1565     | 30       | 3.37        |
|    |                 |         |     | 2009          | 2010        | 1600     | -3530    | -1940    | >1651    | 0        | 3.37        |
| 77 | ELISEBREEN      | NO      |     | 2005          | 2006        |          |          | -726     |          |          | 10.25       |
|    |                 |         |     | 2006          | 2007        |          |          | -542     |          |          | 10.24       |
|    |                 |         |     | 2007          | 2008        |          |          | -172     | 352      | 58       |             |
|    |                 |         |     | 2008          | 2009        |          |          | -579     | 385      | 42       | 10.2        |
| 78 | ENGABREEN       | NO67011 |     | 2005          | 2006        | 1720     | -3160    | -1430    | 1325     | 26       | 39.6        |
|    |                 |         |     | 2006          | 2007        | 3400     | -2300    | 1110     | 1035     | 84       | 39.6        |
|    |                 |         |     | 2007          | 2008        | 2810     | -2500    | 310      | 1093     | 77       | 38.74       |
|    |                 |         |     | 2008          | 2009        | 2870     | -2900    | -30      | 1170     | 63       | 38.7        |
|    |                 |         |     | 2009          | 2010        | 2040     | -2560    | -520     | 1240     | 47       | 38.74       |
| 79 | GRAAFJELLSBREA  | NO      |     | 2005          | 2006        | 1400     | -4450    | -3050    | >1659    | 0        | 8.94        |
|    |                 |         |     | 2006          | 2007        | 3600     | -2850    | 750      | 1375     | 80       | 8.9         |
|    |                 |         |     | 2007          | 2008        | 2660     | -2800    | -140     | 1490     | 56       | 8.41        |
|    |                 |         |     | 2008          | 2009        | 2340     | -2880    | -540     | 1540     | 31       | 8.41        |
|    |                 |         |     | 2009          | 2010        | 1510     | -3350    | -1840    | >1651    | 0        | 8.41        |
| 80 | GRAASUBREEN     | NO0547  |     | 2005          | 2006        | 510      | -2590    | -2080    | >2290    | 0        | 2.25        |
|    |                 |         |     | 2006          | 2007        | 610      | -1320    | -710     | 2265     | 1        | 2.3         |
|    |                 |         |     | 2007          | 2008        | 950      | -860     | 90       |          |          | 2.25        |
|    |                 |         |     | 2008          | 2009        | 810      | -1080    | -280     | 2235     | 7        | 2.12        |
|    |                 |         |     | 2009          | 2010        | 540      | -1600    | -1060    | 2250     | 4        | 2.12        |
| 81 | HANSBREEN       | NO12419 | FXD | 07.09.2005    | 19.09.2006  | 1297     | -1204    | 93       | 300      | 61       | 56.742      |
|    |                 |         | FXD | 19.09.2006    | 10.09.2007  | 1029     | -1033    | -4       | 330      | 54       | 56.742      |
|    |                 |         | FXD | 10.09.2007    | 24.09.2008  | 1225     | -1076    | 149      | 300      | 66       | 56.742      |
|    |                 |         | FXD | 24.09.2008    | 17.09.2009  | 743      | -1586    | -844     | 400      | 25       | 56.742      |
|    |                 |         | FXD | 17.09.2009    | 22.09.2010  | 1063     | -1078    | -14      | 350      | 39       | 56.742      |
| 82 | HANSEBREEN      | NO36206 |     | 2005          | 2006        | 2450     | -6430    | -3980    | >1327    | 0        | 3.1         |
|    |                 |         |     | 2006          | 2007        | 4070     | -3230    | 840      | 1042     | 89       |             |
|    |                 |         |     | 2007          | 2008        | 3900     | -3650    | 260      | 1125     | 64       | 3.06        |
|    |                 |         |     | 2008          | 2009        | 3450     | -4420    | -970     | >1327    | 0        | 3.06        |
|    |                 |         |     | 2009          | 2010        | 2100     | -4310    | -2220    | >1310    | 0        | 2.75        |
| 83 | HELLSTUGUBREEN  | NO0511  |     | 2005          | 2006        | 730      | -2740    | -2010    | >2210    | 0        | 3.03        |
|    |                 |         |     | 2006          | 2007        | 1030     | -1700    | -670     | 1975     | 25       | 3           |
|    |                 |         |     | 2007          | 2008        | 1410     | -1470    | -60      | 1880     | 57       | 3.03        |
|    |                 |         |     | 2008          | 2009        | 1300     | -1530    | -230     | 1920     | 42       | 2.9         |
|    |                 |         |     | 2009          | 2010        | 750      | -2090    | -1340    | 2230     | 0        | 2.9         |
| 84 | IRENEBREEN      | NO15402 |     | 2005          | 2006        |          |          | -822     | 422      | 24       | 4.14        |
|    |                 |         |     | 2006          | 2007        |          |          | -695     | 454      | 20       | 4.12        |
|    |                 |         |     | 2007          | 2008        |          |          | -357     | 396      | 31       | 4.09        |
|    |                 |         |     | 2008          | 2009        |          |          | -630     | 489      | 6        | 4.08        |
|    |                 |         |     | 2009          | 2010        |          |          | -497     |          |          | 4.05        |
| 85 | JUVFONNE        | NO      |     | 2009          | 2010        | 670      | -3910    | -3240    | >1998    | 0        | 0.171       |
| 86 | KONGSVEGEN      | NO15510 | COM | 26.04.2006    | 16.09.2006  | 990      | -972     | 18       | 531      | 46       | 101.9       |
|    |                 |         | COM | 22.04.2007    | 16.09.2007  | 687      | -777     | -90      | 555      | 39       | 101.9       |
|    |                 |         | COM | 24.04.2008    | 12.09.2008  | 733      | -315     | 418      | 434      | 67       | 101.9       |
|    |                 |         | COM | 23.04.2009    | 15.09.2009  |          |          | -80      | 506      | 40       |             |
|    |                 |         |     | 2009          | 2010        |          |          | 130      | 547      | 52       |             |
| 87 | LANGFJORDJOEK.  | NO85008 |     | 2005          | 2006        | 1420     | -3830    | -2410    | >1050    | 0        | 3.65        |
|    |                 |         |     | 2006          | 2007        | 2090     | -2900    | -810     | 870      | 42       | 3.7         |
|    |                 |         |     | 2007          | 2008        | 1670     | -2020    | -350     | 835      | 53       | 3.21        |



| NR | GLACIER NAME    | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA   | AAR | AREA  |
|----|-----------------|---------|-----|------------|------------|------|-------|-------|-------|-----|-------|
|    |                 |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M     | %   | KM²   |
| 88 | MID. LOVENBREEN | NO15506 | COM | 2008       | 2009       | 1880 | -3210 | -1320 | >1050 | 0   | 3.2   |
|    |                 |         |     | 2009       | 2010       | 1890 | -2650 | -760  | 1005  | 12  | 3.21  |
|    |                 |         |     | 29.04.2006 | 20.09.2006 | 747  | -1233 | -486  | 415   | 14  | 5.45  |
|    |                 |         |     | 16.04.2007 | 21.09.2007 | 728  | -978  | -251  | 376   | 26  | 5.45  |
|    |                 |         |     | 04.05.2008 | 19.09.2008 | 748  | -757  | -9    | 331   | 38  | 5.45  |
| 89 | NIGARDSBREEN    | NO31014 | COM | 03.05.2009 | 13.09.2009 |      |       | -140  | 366   | 29  |       |
|    |                 |         |     | 2009       | 2010       |      |       | -200  | 364   | 29  |       |
|    |                 |         |     | 2005       | 2006       | 1747 | -3146 | -1399 | 1850  | 4   | 47.82 |
|    |                 |         |     | 2006       | 2007       | 3092 | -2045 | 1047  | 1320  | 91  | 47.82 |
|    |                 |         |     | 2007       | 2008       | 3010 | -1920 | 1100  | 1325  | 91  | 47.82 |
| 90 | REMBESDALSKAAKA | NO22303 | COM | 2008       | 2009       | 2200 | -1960 | 240   | 1465  | 80  | 47.16 |
|    |                 |         |     | 2009       | 2010       | 1470 | -2270 | -800  | 1770  | 14  | 47.16 |
|    |                 |         |     | 2005       | 2006       | 900  | -3120 | -2220 | >1860 | 0   | 17.1  |
|    |                 |         |     | 2006       | 2007       | 3100 | -1930 | 1170  | 1570  | 85  | 17.1  |
|    |                 |         |     | 2007       | 2008       | 2610 | -2160 | 450   | 1610  | 82  | 17.1  |
| 91 | STORBREEN       | NO0541  | COM | 2008       | 2009       | 2370 | -2210 | 150   | 1655  | 79  | 17.1  |
|    |                 |         |     | 2009       | 2010       | 1280 | -2780 | -1490 | >1854 | 0   | 17.26 |
|    |                 |         |     | 2005       | 2006       | 860  | -3010 | -2150 | >2100 | 0   | 5.35  |
|    |                 |         |     | 2006       | 2007       | 1350 | -1740 | -390  | 1835  | 30  | 5.4   |
|    |                 |         |     | 2007       | 2008       | 1990 | -1880 | 110   | 1770  | 51  | 5.35  |
| 92 | SVELGJABREEN    | NO      | COM | 2008       | 2009       | 1600 | -1830 | -220  | 1760  | 53  | 5.14  |
|    |                 |         |     | 2009       | 2010       | 790  | -2550 | -1760 | 1990  | 4   | 5.14  |
|    |                 |         |     | 2006       | 2007       | 3890 | -2540 | 1350  | 1205  | 78  | 22.5  |
|    |                 |         |     | 2007       | 2008       | 3650 | -2880 | 720   | 1235  | 74  | 22.45 |
|    |                 |         |     | 2008       | 2009       | 3330 | -2970 | 360   | 1310  | 64  | 22.45 |
| 93 | WALDEMARBREEN   | NO15403 | COM | 2009       | 2010       | 1650 | -3290 | -1640 | >1636 | 0   | 22.45 |
|    |                 |         |     | 2005       | 2006       |      |       | -747  | 425   | 16  | 2.57  |
|    |                 |         |     | 2006       | 2007       |      |       | -771  | 428   | 13  |       |
|    |                 |         |     | 2007       | 2008       |      |       | -322  | 357   | 31  |       |
|    |                 |         |     | 2008       | 2009       |      |       | -649  | 412   | 16  | 2.5   |
| 94 | ARTESONRAJU     | PE0003  | COM | 2009       | 2010       |      |       | -577  |       |     | 2.47  |
|    |                 |         |     |            |            |      |       |       |       |     |       |
|    |                 |         |     |            |            |      |       |       |       |     |       |
|    |                 |         |     |            |            |      |       |       |       |     |       |
|    |                 |         |     |            |            |      |       |       |       |     |       |
| 95 | YANAMAREY       | PE0004  | COM | 2005       | 2006       |      |       | -1679 |       |     | 3.208 |
|    |                 |         |     | 2006       | 2007       |      |       | -1522 |       |     | 3.223 |
|    |                 |         |     | 2007       | 2008       |      |       | 471   |       |     | 3.223 |
|    |                 |         |     | 2008       | 2009       |      |       | -658  |       |     | 3.05  |
|    |                 |         |     | 03.06.2009 | 22.04.2010 |      |       | 49    | 5071  | 42  | 4.102 |
| 96 | MALADETA        | ES9020  | FXD | 2005       | 2006       |      |       | -1712 | 4888  | 27  | 0.225 |
|    |                 |         |     | 2006       | 2007       |      |       | -1532 | 4868  | 36  | 0.206 |
|    |                 |         |     | 2007       | 2008       |      |       | 89    |       |     | 0.34  |
|    |                 |         |     | 2008       | 2009       |      |       | -525  |       |     | 0.137 |
|    |                 |         |     | 30.09.2009 | 27.08.2010 |      |       | -182  | 4912  | 28  |       |
| 97 | MARMAGLACIAEREN | SE0799  | FXD |            |            |      |       |       |       |     |       |
|    |                 |         |     |            |            |      |       |       |       |     |       |
|    |                 |         |     |            |            |      |       |       |       |     |       |
|    |                 |         |     |            |            |      |       |       |       |     |       |
|    |                 |         |     |            |            |      |       |       |       |     |       |
| 98 | RABOTS GLACIAER | SE0785  | FXD | 2005       | 2006       | 960  | -2610 | -1650 | 1655  | 11  | 3.965 |
|    |                 |         |     | 2006       | 2007       | 1000 | -1530 | -530  | 1640  | 13  | 3.965 |
|    |                 |         |     | 2007       | 2008       | 1210 | -1090 | 120   | 1600  | 43  | 3.965 |
|    |                 |         |     | 2008       | 2009       | 1010 | -2400 | -1390 | 1640  | 15  | 3.965 |
|    |                 |         |     | 2009       | 2010       | 800  | -1300 | -500  | 1635  | 18  | 3.965 |
| 99 |                 |         |     | 2005       | 2006       | 890  | -2520 | -1630 | 1505  | 19  | 3.946 |
|    |                 |         |     | 2007       | 2008       | 1630 | -1280 | 350   | 1380  | 43  | 3.946 |
|    |                 |         |     | 2008       | 2009       | 1450 | -1950 | -500  | 1430  | 36  | 3.946 |
|    |                 |         |     | 2009       | 2010       | 790  | -1870 | -1080 | 1670  | 13  | 3.946 |
|    |                 |         |     |            |            |      |       |       |       |     |       |

| NR                 | GLACIER NAME       | PSFG NR | SYS | FROM<br>D M Y | TO<br>D M Y | BW<br>MM | BS<br>MM | BA<br>MM | ELA<br>M | AAR<br>% | AREA<br>KM² |
|--------------------|--------------------|---------|-----|---------------|-------------|----------|----------|----------|----------|----------|-------------|
| 99                 | RIUKOJETNA         | SE0790  |     | 2005          | 2006        | 810      | -2210    | -1400    | 1450     | 0        | 4.651       |
|                    |                    |         |     | 2006          | 2007        | 1260     | -2220    | -960     | 1440     | 0        | 4.651       |
|                    |                    |         |     | 2007          | 2008        | 860      | -1460    | -590     | >1440    | 0        | 4.651       |
|                    |                    |         |     | 2008          | 2009        | 1260     | -1980    | -720     | 1440     | 2        | 4.651       |
|                    |                    |         |     | 2009          | 2010        | 640      | -1600    | -960     | >1440    | 0        | 4.651       |
| 100                | STORGLACIAEREN     | SE0788  |     | 2005          | 2006        | 1100     | -2820    | -1720    | 1615     | 17       | 3.211       |
|                    |                    |         |     | 2006          | 2007        | 1530     | -1120    | 410      | 1480     | 50       | 3.211       |
|                    |                    |         |     | 2007          | 2008        | 1930     | -1350    | 580      | 1410     | 53       | 3.211       |
|                    |                    |         |     | 2008          | 2009        | 1300     | -1830    | -530     | 1495     | 37       | 3.211       |
|                    |                    |         |     | 2009          | 2010        | 960      | -1650    | -690     | 1570     | 28       | 3.211       |
| 101                | TARFALAGLAC.       | SE0791  |     | 2005          | 2006        | 910      | -3440    | -2530    | 1790     | 0        | 1.006       |
|                    |                    |         |     | 2006          | 2007        | 1490     | -1270    | 210      | 1475     | 73       | 1.006       |
|                    |                    |         |     | 2007          | 2008        | 1280     | -1470    | -200     | 1590     | 30       | 1.006       |
|                    |                    |         |     | 2008          | 2009        | 1150     | -2860    | -1710    | >1790    | 0        | 1.006       |
|                    |                    |         |     | 2009          | 2010        | 990      | -2050    | -1060    | >1800    | 0        | 1.006       |
| <u>SWITZERLAND</u> |                    |         |     |               |             |          |          |          |          |          |             |
| 102                | BASODINO           | CH0104  |     | 16.09.2005    | 14.11.2006  | 962      |          | -2501    | >3300    | 0        | 2.28        |
|                    |                    |         |     | 14.11.2006    | 07.10.2007  | 800      |          | -902     | 3100     | 5        | 2.28        |
|                    |                    |         | OTH | 07.10.2007    | 11.09.2008  | 1145     | -2313    | -1168    | 3100     | 2        | 2.28        |
|                    |                    |         | OTH | 11.09.2008    | 10.09.2009  | 2487     | -2357    | 130      | 2750     | 70       | 2.28        |
|                    |                    |         | OTH | 10.09.2009    | 20.09.2010  | 1557     | -2141    | -584     | 2990     | 30       | 2.28        |
| 103                | FINDELEN           | CH0016  | COM | 17.10.2005    | 11.10.2006  |          |          | -1200    | 3330     | 42       | 15.3        |
|                    |                    |         | COM | 11.10.2006    | 08.10.2007  |          |          | -200     | 3175     | 64       | 15.3        |
|                    |                    |         | COM | 08.10.2007    | 12.10.2008  |          |          | -300     | 3240     | 62       | 15.3        |
|                    |                    |         | COM | 12.10.2008    | 05.10.2009  |          |          | 100      | 3175     | 69       | 15.3        |
|                    |                    |         | COM | 05.10.2009    | 29.09.2010  |          |          | -470     | 3280     | 52       | 13.1        |
| 104                | GRIES              | CH0003  | FXD | 01.10.2005    | 30.09.2006  | 914      | -2909    | -1995    | 3325     | 2        | 5.084       |
|                    |                    |         | FXD | 01.10.2006    | 30.09.2007  | 626      | -2099    | -1473    | 3324     | 2        | 4.973       |
|                    |                    |         | OTH | 16.09.2007    | 10.09.2008  | 1139     | -2740    | -1601    | 3125     | 5        | 4.973       |
|                    |                    |         | OTH | 10.09.2008    | 06.09.2009  | 2465     | -3348    | -883     | 3134     | 3        | 4.973       |
|                    |                    |         | OTH | 06.09.2009    | 04.09.2010  | 1623     | -2930    | -1307    | 3085     | 11       | 4.973       |
| 105                | PIZOL              | CH0081  | OTH | 13.09.2006    | 03.09.2007  | 1142     | -2979    | -1837    | >2786    | 0        | 0.081       |
|                    |                    |         | OTH | 03.02.2007    | 25.09.2008  | 1447     | -2179    | -731     | >2786    | 9        | 0.081       |
|                    |                    |         | OTH | 25.09.2008    | 13.09.2009  | 1591     | -2812    | -1220    | >2786    | 0        | 0.081       |
|                    |                    |         | FLO | 13.09.2009    | 22.09.2010  | 1180     | -2040    | -860     | >2786    | 0        | 0.081       |
| 106                | RAETZLI (PL.MORTE) | CH0065  |     | 2009          | 2010        |          |          | -874     |          |          |             |
| 107                | SILVRETTA          | CH0090  | FXD | 01.10.2005    | 30.09.2006  | 1235     | -2684    | -1449    | 3071     | 2        | 2.814       |
|                    |                    |         | FXD | 01.10.2006    | 30.09.2007  | 774      | -1690    | -916     | 2877     | 21       | 2.789       |
|                    |                    |         | OTH | 16.09.2007    | 20.09.2008  | 1674     | -2313    | -639     | 2855     | 31       | 2.789       |
|                    |                    |         | OTH | 20.09.2008    | 26.09.2009  | 1547     | -2644    | -1097    | 2995     | 6        | 2.785       |
|                    |                    |         | OTH | 26.09.2009    | 99.09.2010  | 1325     | -1593    | -268     | 2814     | 44       | 2.785       |
| 108                | TSANFLEURON        | CH0033  | FLO | 11.10.2009    | 21.09.2010  | 1075     | -1992    | -917     | >2945    | 1        | 2.752       |
| <u>U.S.A.</u>      |                    |         |     |               |             |          |          |          |          |          |             |
| 109                | COLUMBIA (2057)    | US2057  | FXD | 01.10.2005    | 01.10.2006  |          |          | -980     | 1630     | 40       | 0.9         |
|                    |                    |         | FXD | 01.10.2006    | 01.10.2007  |          |          | -370     | 1575     | 60       | 0.9         |
|                    |                    |         | FXD | 01.10.2007    | 03.10.2008  |          |          | 960      | 1630     | 86       |             |
|                    |                    |         | FXD | 01.10.2008    | 02.10.2009  |          |          | -900     | 1640     | 37       |             |
|                    |                    |         | FXD | 02.10.2009    | 27.09.2010  |          |          | -210     | 1615     | 63       |             |
| 110                | DANIELS            | US2052  | FXD | 02.10.2005    | 30.09.2006  |          |          | 1250     |          | 34       | 0.4         |
|                    |                    |         | FXD | 30.09.2006    | 30.09.2007  |          |          | 120      |          | 62       | 0.4         |
|                    |                    |         | FXD | 30.09.2007    | 04.10.2008  |          |          | 410      |          | 76       |             |
|                    |                    |         | FXD | 30.09.2008    | 30.09.2009  |          |          | -1350    |          | 28       |             |
|                    |                    |         | FXD | 30.09.2009    | 30.09.2010  |          |          | -260     |          | 60       |             |
| 111                | EASTON             | US2008  | FXD | 02.10.2005    | 02.10.2006  |          |          | 790      | 2125     | 50       | 2.9         |
|                    |                    |         | FXD | 02.10.2006    | 30.09.2007  |          |          | 260      | 2075     | 70       | 2.9         |
|                    |                    |         | FXD | 30.09.2007    | 05.10.2008  |          |          | 450      | 2125     | 74       |             |
|                    |                    |         | FXD | 03.10.2008    | 04.10.2009  |          |          | -2060    | 2200     | 38       |             |
|                    |                    |         | FXD | 04.10.2009    | 04.10.2010  |          |          | 680      | 2030     | 77       |             |
| 112                | EMMONS             | US2022  | STR | 05.10.2005    | 10.10.2006  | 2440     | -3380    | -940     | 2745     | 40       | 11.59       |

| NR  | GLACIER NAME    | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA   | AAR | AREA   |
|-----|-----------------|---------|-----|------------|------------|------|-------|-------|-------|-----|--------|
|     |                 |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M     | %   | KM²    |
| 113 | FOSS            | US2053  | STR | 10.10.2006 | 09.10.2007 | 2850 | -3280 | -430  | 2539  | 51  |        |
|     |                 |         | STR | 09.10.2007 | 02.10.2008 | 2580 | -3210 | -630  | 2800  | 36  |        |
|     |                 |         | COM | 02.10.2008 | 06.10.2009 | 1460 | -3260 | -1800 | 3770  |     |        |
|     |                 |         | COM | 06.10.2009 | 07.10.2010 | 2550 | -1530 | 1020  | 2615  | 47  |        |
|     |                 |         | FXD | 02.10.2005 | 30.09.2006 |      |       | -1020 |       | 36  | 0.3    |
|     |                 |         | FXD | 30.09.2006 | 30.09.2007 |      |       | -380  |       | 54  | 0.3    |
|     |                 |         | FXD | 30.09.2007 | 04.10.2008 |      |       | 180   |       | 72  |        |
| 114 | GULKANA         | US0200  | FXD | 30.09.2008 | 30.09.2009 |      |       | -2020 |       | 12  |        |
|     |                 |         | FXD | 30.09.2009 | 01.10.2010 |      |       | -110  |       | 62  |        |
|     |                 |         |     | 01.09.2005 | 01.09.2006 | 1310 | -1660 | -350  | 1732  | 64  | 15.805 |
|     |                 |         |     | 01.09.2006 | 01.09.2007 | 1280 | -2680 | -1390 | 1809  | 53  | 15.628 |
|     |                 |         | COM | 17.09.2007 | 08.09.2008 | 990  | -1170 | -180  | 1707  |     | 15.45  |
|     |                 |         | COM | 08.09.2008 | 07.09.2009 | 1220 | -1940 | -720  | 1789  | 64  | 15.28  |
|     |                 |         | COM | 16.09.2009 | 03.10.2010 | 731  | -2563 | -1832 |       |     | 15.11  |
| 115 | ICE WORM        | US2054  | FXD | 02.10.2005 | 30.09.2006 |      |       | -1350 |       | 20  | 0.1    |
|     |                 |         | FXD | 30.09.2006 | 30.09.2007 |      |       | -620  |       | 48  | 0.1    |
|     |                 |         | FXD | 30.09.2007 | 04.10.2008 |      |       | -100  |       | 60  |        |
|     |                 |         | FXD | 30.09.2008 | 30.09.2009 |      |       | -1560 |       | 35  |        |
|     |                 |         | FXD | 30.09.2009 | 30.09.2010 |      |       | -380  |       | 60  |        |
|     |                 |         | COM | 15.09.2005 | 15.09.2006 |      |       | -170  | 1025  | 68  |        |
|     |                 |         | COM | 15.09.2006 | 22.09.2007 |      |       | 150   | 1000  | 72  |        |
| 116 | LEMON CREEK     | US      | COM | 22.09.2007 | 27.08.2008 |      |       | 778   | 900   | 80  | 11.6   |
|     |                 |         | COM | 22.09.2008 | 14.09.2009 |      |       | -700  | 1060  | 64  |        |
|     |                 |         | COM | 14.09.2009 | 20.09.2010 |      |       | -580  | 1075  | 50  |        |
|     | LOWER CURTIS    | US2055  | FXD | 01.10.2005 | 26.10.2006 |      |       | -1060 | 1710  | 40  | 0.8    |
|     |                 |         | FXD | 02.10.2006 | 01.10.2007 |      |       | -400  | 1650  | 60  | 0.8    |
|     |                 |         | FXD | 01.10.2007 | 03.10.2008 |      |       | 120   | 1710  | 66  |        |
|     |                 |         | FXD | 01.10.2008 | 01.10.2009 |      |       | -2150 | 1675  | 20  |        |
| 118 | LYNCH           | US2056  | FXD | 01.10.2009 | 04.10.2010 |      |       | -440  | 1600  | 58  |        |
|     |                 |         | FXD | 02.10.2005 | 30.09.2006 |      |       | -1050 |       | 42  | 0.6    |
|     |                 |         | FXD | 30.09.2006 | 30.09.2007 |      |       | 70    |       | 70  | 0.6    |
|     |                 |         | FXD | 30.09.2007 | 04.10.2008 |      |       | 510   |       | 76  |        |
|     |                 |         | FXD | 30.09.2008 | 30.09.2009 |      |       | -1820 |       | 25  |        |
|     |                 |         | FXD | 30.09.2009 | 30.09.2010 |      |       | -340  |       | 56  |        |
|     |                 |         |     |            |            |      |       |       |       |     |        |
| 119 | NISQUALLY       | US2027  | STR | 11.10.2005 | 12.10.2006 | 2990 | -3750 | -760  | 3000  | 31  | 6.76   |
|     |                 |         | STR | 12.10.2006 | 16.10.2007 | 2480 | -3880 | -1400 | 3000  | 29  |        |
|     |                 |         | STR | 16.10.2007 | 01.10.2008 | 2450 | -3530 | -1080 | 3100  | 25  |        |
|     |                 |         | COM | 01.10.2008 | 07.10.2009 | 2150 | -3790 | -1640 | 3110  |     |        |
|     |                 |         | COM | 07.10.2009 | 06.10.2010 | 2940 | -2930 | 20    | 2540  | 72  |        |
|     | NOISY CREEK     | US2078  | STR | 26.09.2005 | 25.09.2006 | 3080 | -3400 | -320  | 1889  | 0   | 0.54   |
|     |                 |         | STR | 25.09.2006 | 13.10.2007 | 3030 | -3400 | -360  | 1825  | 1   |        |
|     |                 |         | STR | 13.10.2007 | 25.09.2008 | 3130 | -3420 | -290  | 1830  | 20  |        |
|     |                 |         | COM | 23.09.2008 | 21.09.2009 | 3140 | -4330 | -1190 | >1920 |     |        |
| 121 | NORTH KLAUWATTI | US2076  | COM | 21.09.2009 | 21.09.2010 | 3130 | -3310 | -180  | 1815  | 34  |        |
|     |                 |         | STR | 26.09.2005 | 11.10.2006 | 2240 | -3380 | -1140 | 2300  | 19  | 1.46   |
|     |                 |         | STR | 10.11.2006 | 13.10.2007 | 2950 | -3690 | -740  | 2165  | 50  |        |
|     |                 |         | STR | 13.10.2007 | 23.09.2008 | 2930 | -3160 | -220  | 2080  | 70  |        |
|     |                 |         | COM | 23.09.2008 | 21.09.2009 | 2460 | -4290 | -1830 | >2409 |     |        |
|     |                 |         | COM | 21.09.2009 | 21.09.2010 | 2620 | -2370 | 250   | 2065  | 74  |        |
|     |                 |         |     |            |            |      |       |       |       |     |        |
| 122 | RAINBOW         | US2003  | FXD | 01.10.2005 | 01.10.2006 |      |       | -610  | 1730  | 46  | 1.6    |
|     |                 |         | FXD | 01.10.2006 | 29.09.2007 |      |       | 290   | 1650  | 76  | 1.6    |
|     |                 |         | FXD | 29.09.2007 | 05.10.2008 |      |       | 650   | 1730  | 80  |        |
|     |                 |         | FXD | 29.09.2008 | 27.09.2009 |      |       | -1980 | 1850  | 36  |        |
|     |                 |         | FXD | 27.09.2009 | 27.09.2010 |      |       | 760   | 1650  | 80  |        |
|     | SANDALEE        | US2079  | STR | 26.09.2005 | 25.09.2006 | 2700 | -3100 | -400  | 2210  | 4   | 0.2    |
|     |                 |         | STR | 25.09.2006 | 13.10.2007 | 2920 | -2890 | -60   | 2160  | 6   |        |
|     |                 |         | STR | 13.10.2007 | 23.09.2008 | 2830 | -2970 | -140  | 2175  | 50  |        |
|     |                 |         | COM | 23.09.2008 | 21.09.2009 | 2550 | -3550 | -650  | >1975 |     |        |
|     |                 |         | COM | 21.09.2009 | 21.09.2010 | 2400 | -2160 | 240   | 2110  | 67  |        |
| 124 | SHOLES          | US      | FXD | 01.10.2005 | 01.10.2006 |      |       | -710  |       | 45  | 0.9    |
|     |                 |         | FXD | 01.10.2006 | 29.09.2007 |      |       | -210  |       | 72  | 0.9    |

| NR  | GLACIER NAME  | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA   | AAR | AREA   |
|-----|---------------|---------|-----|------------|------------|------|-------|-------|-------|-----|--------|
|     |               |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M     | %   | KM²    |
| 125 | SILVER        | US2077  | FXD | 29.09.2007 | 06.08.2008 |      |       | 200   |       | 75  |        |
|     |               |         | FXD | 29.09.2008 | 27.09.2009 |      |       | -2680 | 1920  | 15  |        |
|     |               |         | FXD | 27.09.2009 | 27.09.2010 |      |       | 940   |       | 84  |        |
|     |               |         | STR | 26.09.2005 | 25.09.2006 | 2020 | -3030 | -1010 | 2565  | 6   | 0.49   |
|     |               |         | STR | 25.09.2006 | 13.10.2007 | 2190 | -2840 | -650  | 2560  | 8   |        |
|     |               |         | STR | 13.10.2007 | 23.09.2008 | 2750 | -2490 | 260   | 2370  | 40  |        |
| 126 | SOUTH CASCADE | US2013  | COM | 23.09.2008 | 21.09.2009 | 1430 | -3410 | -1990 | 2550  |     |        |
|     |               |         | COM | 21.09.2009 | 21.09.2010 | 2140 | -1590 | 550   | 2220  | 15  |        |
|     |               |         | COM | 19.10.2005 | 14.10.2006 | 2610 | -4190 | -1580 | >2125 |     | 1.74   |
|     |               |         | COM | 14.10.2006 | 27.09.2007 | 3410 | -3610 | -200  | 1880  | 60  | 1.73   |
|     |               |         | COM | 27.09.2007 | 04.10.2008 | 3220 | -3510 | -290  | 1870  | 60  | 1.73   |
|     |               |         | COM | 04.10.2008 | 14.10.2009 | 3120 | -4980 | -1860 | >2125 |     | 1.72   |
| 127 | TAKU          | US1805  |     | 2009       | 2010       | 2540 |       | -810  |       |     |        |
|     |               |         | COM | 15.09.2005 | 15.09.2006 |      |       | 230   | 975   | 82  |        |
|     |               |         | COM | 15.09.2006 | 22.09.2007 |      |       | 480   | 930   | 84  |        |
|     |               |         | COM | 22.09.2007 | 27.08.2008 |      |       | 950   | 800   | 90  |        |
|     |               |         | COM | 22.09.2008 | 14.09.2009 |      |       | -310  | 960   |     |        |
|     |               |         | COM | 14.09.2009 | 20.09.2010 |      |       | -120  | 1000  |     |        |
| 128 | WOLVERINE     | US0411  |     | 01.09.2005 | 01.09.2006 | 2720 | -3540 | -820  | 1188  | 62  | 16.711 |
|     |               |         |     | 01.09.2006 | 01.09.2007 | 1880 | -2660 | -780  | 1199  | 61  | 16.702 |
|     |               |         | COM | 18.10.2007 | 04.10.2008 | 3460 | -2580 | 880   | 1050  |     | 16.69  |
|     |               |         | COM | 04.10.2008 | 19.09.2009 | 1450 | -3230 | -1780 | 1290  |     | 16.68  |
|     |               |         | COM | 21.10.2009 | 27.09.2010 | 2474 | -2559 | -85   |       |     | 16.67  |
|     |               |         | FXD | 01.10.2005 | 01.10.2006 |      |       | -930  |       | 54  | 0.3    |
| 129 | YAWNING       | US2050  | FXD | 01.10.2006 | 29.09.2007 |      |       | -130  |       | 70  | 0.3    |
|     |               |         | FXD | 29.09.2007 | 27.09.2008 |      |       | 480   |       | 70  |        |
|     |               |         | FXD | 29.09.2008 | 27.09.2009 |      |       | -1620 |       | 30  |        |
|     |               |         | FXD | 27.09.2009 | 30.09.2010 |      |       | 170   |       | 70  |        |
|     |               |         |     |            |            |      |       |       |       |     |        |
|     |               |         |     |            |            |      |       |       |       |     |        |

|   |
|---|
| <p>WORLD GLACIER MONITORING SERVICE</p> <p><b>MASS BALANCE STUDY RESULTS</b></p> <p><b>SUMMARY DATA</b></p> |
|---|

TABLE CC

ADDENDA FROM EARLIER YEARS

|              |   |
|--------------|---|
| NR           | Record number   |
| GLACIER NAME | 15 alphabetic or numeric digits   |
| PSFG NUMBER  | 5 digits identifying glacier with alphabetic prefix denoting country  |
| SYS          | System of measurement: FLO = floating-date system<br>FXD = fixed-date system<br>STR = stratigraphic system<br>COM = combined system; usually of STR and FXD according to Mayo et al. (1972)<br>OTH = Other System |
| FROM         | Day, month and year of beginning of balance/measurement year  |
| TO           | Day, month and year of end of balance/measurement year  |
| BW           | Specific winter balance in mm water equivalent  |
| BS           | Specific summer balance in mm water equivalent  |
| BA           | Specific annual balance in mm water equivalent  |
| ELA          | Altitude of equilibrium line or annual equilibrium line in meters above sea level   |
| AAR          | Ratio of accumulation area to total area of the glacier in percent  |
| AREA         | Area (in square kilometers) of the glacier used for calculation of specific quantities  |

| NR                 | GLACIER NAME  | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA  | AAR | AREA  |
|--------------------|---------------|---------|-----|------------|------------|------|-------|-------|------|-----|-------|
|                    |               |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M    | %   | KM²   |
| <u>JAPAN</u>       |               |         |     |            |            |      |       |       |      |     |       |
| 1                  | HAMAGURI YUKI | JP0001  |     | 1966       | 07.10.1967 |      | -7298 |       |      |     |       |
|                    |               |         |     | 07.10.1967 | 28.09.1968 | 7658 | -6220 | 1438  |      |     |       |
|                    |               |         |     | 28.09.1968 | 03.10.1969 | 5835 | -8285 | -2450 |      |     |       |
|                    |               |         |     | 03.10.1969 | 26.09.1970 | 6750 | -7031 | -281  |      |     |       |
|                    |               |         |     | 26.09.1970 | 21.10.1971 | 6851 | -7645 | -794  |      |     |       |
|                    |               |         |     | 21.10.1971 | 02.10.1972 | 8812 | -8512 | 300   |      |     |       |
|                    |               |         |     | 02.10.1972 | 12.10.1973 | 7403 | -5728 | 1675  |      |     |       |
|                    |               |         |     | 12.10.1973 | 14.10.1974 | 6375 | -5837 | 538   |      |     |       |
|                    |               |         |     | 14.10.1974 | 22.10.1975 | 7785 | -7460 | 325   |      |     |       |
|                    |               |         |     | 22.10.1975 | 06.10.1976 | 6180 | -8367 | -2187 |      |     |       |
|                    |               |         |     | 06.10.1976 | 03.10.1977 | 6832 | -7220 | -388  |      |     |       |
|                    |               |         |     | 03.10.1977 | 02.10.1978 | 8317 | -6692 | 1625  |      |     |       |
|                    |               |         |     | 02.10.1978 | 17.10.1979 | 6765 | -8065 | -1300 |      |     |       |
|                    |               |         |     | 17.10.1979 | 23.09.1980 | 4508 | -4771 | -263  |      |     |       |
|                    |               |         |     | 23.09.1980 | 06.10.1981 | 9323 | -6885 | 2438  |      |     |       |
|                    |               |         |     | 06.10.1981 | 33.10.1982 | 6443 | -6080 | 363   |      |     |       |
|                    |               |         |     | 33.10.1982 | 14.09.1983 | 5333 | -5171 | 162   |      |     |       |
|                    |               |         |     | 14.09.1983 | 30.09.1984 | 7447 | -6034 | 1413  |      |     |       |
|                    |               |         |     | 30.09.1984 | 18.10.1985 | 4163 | -8951 | -4788 |      |     |       |
|                    |               |         |     | 18.10.1985 | 27.09.1986 | 8535 | -6072 | 2463  |      |     |       |
|                    |               |         |     | 27.09.1986 | 27.09.1987 | 5797 | -6052 | -255  |      |     |       |
|                    |               |         |     | 27.09.1987 | 02.10.1988 | 4848 | -6643 | -1795 |      |     |       |
|                    |               |         |     | 02.10.1988 | 1989       | 8580 |       |       |      |     |       |
|                    |               |         |     | 1989       | 19.10.1990 |      | -7305 |       |      |     |       |
|                    |               |         |     | 19.10.1990 | 06.10.1991 | 6713 | -7026 | -313  |      |     |       |
|                    |               |         |     | 06.10.1991 | 08.10.1992 |      |       | 2094  |      |     |       |
|                    |               |         |     | 08.10.1992 | 01.10.1993 | 9682 | -8369 | 1313  |      |     |       |
|                    |               |         |     | 01.10.1993 | 03.10.1994 |      |       | 693   |      |     |       |
|                    |               |         |     | 03.10.1994 | 09.10.1995 |      |       | -765  |      |     |       |
|                    |               |         |     | 09.10.1995 | 03.10.1996 | 7516 | -4193 | 3323  |      |     |       |
|                    |               |         |     | 03.10.1996 | 03.10.1997 | 5567 | -8269 | -2702 |      |     |       |
|                    |               |         |     | 03.10.1997 | 11.10.1998 | 4189 | -8376 | -4187 |      |     |       |
|                    |               |         |     | 11.10.1998 | 03.10.1999 | 9276 | -7913 | 1363  |      |     |       |
|                    |               |         |     | 03.10.1999 | 06.10.2000 | 9381 | -5669 | 3712  |      |     |       |
|                    |               |         |     | 06.10.2000 | 08.10.2001 | 6756 | -9661 | -2905 |      |     |       |
|                    |               |         |     | 08.10.2001 | 13.10.2002 | 8440 | -8951 | -511  |      |     |       |
|                    |               |         |     | 13.10.2002 | 14.10.2003 | 9087 | -7933 | 1154  |      |     |       |
|                    |               |         |     | 14.10.2003 | 30.09.2004 | 6185 | -7680 | -1495 |      |     |       |
|                    |               |         |     | 30.09.2004 | 03.10.2005 | 8963 | -9499 | -536  |      |     |       |
| <u>SWITZERLAND</u> |               |         |     |            |            |      |       |       |      |     |       |
| 2                  | GRIES         | CH0003  | FXD | 01.10.1961 | 30.09.1962 | 1008 | -1992 | -984  | 3272 | 4   | 6.574 |
|                    |               |         | FXD | 01.10.1962 | 30.09.1963 | 1269 | -1449 | -180  | 2822 | 60  | 6.55  |
|                    |               |         | FXD | 01.10.1963 | 30.09.1964 | 1666 | -2354 | -688  | 2912 | 44  | 6.534 |
|                    |               |         | FXD | 01.10.1964 | 30.09.1965 | 846  | -401  | 445   | 2662 | 70  | 6.515 |
|                    |               |         | FXD | 01.10.1965 | 30.09.1966 | 845  | -1202 | -357  | 2807 | 61  | 6.496 |
|                    |               |         | FXD | 01.10.1966 | 30.09.1967 | 1475 | -1446 | 29    | 2757 | 68  | 6.422 |
|                    |               |         | FXD | 01.10.1967 | 30.09.1968 | 1124 | -745  | 379   | 2667 | 74  | 6.434 |
|                    |               |         | FXD | 01.10.1968 | 30.09.1969 | 1503 | -770  | 733   | 2622 | 80  | 6.42  |
|                    |               |         | FXD | 01.10.1969 | 30.09.1970 | 1471 | -2229 | -758  | 3072 | 23  | 6.415 |
|                    |               |         | FXD | 01.10.1970 | 30.09.1971 | 1449 | -1976 | -527  | 2892 | 45  | 6.403 |
|                    |               |         | FXD | 01.10.1971 | 30.09.1972 | 1283 | -875  | 408   | 2657 | 74  | 6.396 |
|                    |               |         | FXD | 01.10.1972 | 30.09.1973 | 771  | -1866 | -1095 | 3127 | 8   | 6.388 |
|                    |               |         | FXD | 01.10.1973 | 30.09.1974 | 1509 | -1687 | -178  | 2812 | 61  | 6.379 |
|                    |               |         | FXD | 01.10.1974 | 30.09.1975 | 1565 | -1187 | 378   | 2722 | 71  | 6.372 |
|                    |               |         | FXD | 01.10.1975 | 30.09.1976 | 684  | -1705 | -1021 | 3052 | 25  | 6.364 |
|                    |               |         | FXD | 01.10.1976 | 30.09.1977 | 1808 | -642  | 1166  | 2522 | 94  | 6.356 |
|                    |               |         | FXD | 01.10.1977 | 30.09.1978 | 2165 | -1109 | 1056  | 2617 | 81  | 6.348 |
|                    |               |         | FXD | 01.10.1978 | 30.09.1979 | 1128 | -2013 | -885  | 3087 | 16  | 6.364 |
|                    |               |         | FXD | 01.10.1979 | 30.09.1980 | 1449 | -879  | 570   | 2662 | 75  | 6.261 |

| NR | GLACIER NAME | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA  | AAR | AREA  |
|----|--------------|---------|-----|------------|------------|------|-------|-------|------|-----|-------|
|    |              |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M    | %   | KM²   |
|    |              |         | FXD | 01.10.1980 | 30.09.1981 | 952  | -1276 | -324  | 2917 | 54  | 6.237 |
|    |              |         | FXD | 01.10.1981 | 30.09.1982 | 1205 | -2509 | -1304 | 3102 | 10  | 6.228 |
|    |              |         | FXD | 01.10.1982 | 30.09.1983 | 1314 | -2093 | -779  | 3052 | 24  | 6.221 |
|    |              |         | FXD | 01.10.1983 | 30.09.1984 | 875  | -879  | -4    | 2762 | 61  | 6.209 |
|    |              |         | FXD | 01.10.1984 | 30.09.1985 | 1070 | -1596 | -526  | 3067 | 19  | 6.194 |
|    |              |         | FXD | 01.10.1985 | 30.09.1986 | 1767 | -2714 | -947  | 3087 | 11  | 6.077 |
|    |              |         | FXD | 01.10.1986 | 30.09.1987 | 883  | -1616 | -733  | 3057 | 21  | 5.991 |
|    |              |         | FXD | 01.10.1987 | 30.09.1988 | 1244 | -2168 | -924  | 3042 | 25  | 5.963 |
|    |              |         | FXD | 01.10.1988 | 30.09.1989 | 1439 | -2510 | -1071 | 3057 | 20  | 5.929 |
|    |              |         | FXD | 01.10.1989 | 30.09.1990 | 1167 | -3155 | -1988 | 3326 | 0   | 5.891 |
|    |              |         | FXD | 01.10.1990 | 30.09.1991 | 1186 | -2530 | -1344 | 3057 | 17  | 5.799 |
|    |              |         | FXD | 01.10.1991 | 30.09.1992 | 1198 | -2323 | -1125 | 3047 | 25  | 5.933 |
|    |              |         | FXD | 01.10.1992 | 30.09.1993 | 716  | -1768 | -1052 | 3087 | 12  | 5.879 |
|    |              |         | FXD | 01.10.1993 | 30.09.1994 | 1587 | -1796 | -209  | 2947 | 51  | 5.822 |
|    |              |         | FXD | 01.10.1994 | 30.09.1995 | 1185 | -1463 | -278  | 2962 | 49  | 5.781 |
|    |              |         | FXD | 01.10.1995 | 30.09.1996 | 632  | -1149 | -517  | 2992 | 39  | 5.755 |
|    |              |         | FXD | 01.10.1996 | 30.09.1997 | 1598 | -2666 | -1068 | 3137 | 9   | 5.734 |
|    |              |         | FXD | 01.10.1997 | 30.09.1998 | 962  | -3015 | -2053 | 3326 | 0   | 5.767 |
|    |              |         | FXD | 01.10.1998 | 30.09.1999 | 1676 | -2240 | -564  | 2952 | 46  | 5.324 |
|    |              |         | FXD | 01.10.1999 | 30.09.2000 | 1392 | -2377 | -985  | 3037 | 23  | 5.314 |
|    |              |         | FXD | 01.10.2000 | 30.09.2001 | 1802 | -2031 | -229  | 2947 | 48  | 5.309 |
|    |              |         | FXD | 01.10.2001 | 30.09.2002 | 876  | -1866 | -990  | 3047 | 20  | 5.302 |
|    |              |         | FXD | 01.10.2002 | 30.09.2003 | 1558 | -4269 | -2711 | 3326 | 0   | 5.274 |
|    |              |         | FXD | 01.10.2003 | 30.09.2004 | 1343 | -2489 | -1146 | 3326 | 2   | 5.167 |
|    |              |         | FXD | 01.10.2004 | 30.09.2005 | 1142 | -2654 | -1512 | 3325 | 1   | 5.133 |
| 3  | SILVRETTA    | CH0090  | FXD | 01.10.1959 | 30.09.1960 | 808  | -522  | 286   | 2657 | 72  | 3.246 |
|    |              |         | FXD | 01.10.1960 | 30.09.1961 | 1211 | -1008 | 203   | 2667 | 73  | 3.243 |
|    |              |         | FXD | 01.10.1961 | 30.09.1962 | 1334 | -1738 | -404  | 2872 | 30  | 3.236 |
|    |              |         | FXD | 01.10.1962 | 30.09.1963 | 867  | -1909 | -1042 | 3007 | 5   | 3.229 |
|    |              |         | FXD | 01.10.1963 | 30.09.1964 | 973  | -2348 | -1375 | 3084 | 0   | 3.223 |
|    |              |         | FXD | 01.10.1964 | 30.09.1965 | 1323 | -43   | 1280  | 2482 | 98  | 3.216 |
|    |              |         | FXD | 01.10.1965 | 30.09.1966 | 1338 | -60   | 1278  | 2527 | 96  | 3.202 |
|    |              |         | FXD | 01.10.1966 | 30.09.1967 | 1452 | -1076 | 376   | 2662 | 74  | 3.191 |
|    |              |         | FXD | 01.10.1967 | 30.09.1968 | 1311 | -680  | 631   | 2602 | 83  | 3.184 |
|    |              |         | FXD | 01.10.1968 | 30.09.1969 | 769  | -944  | -175  | 2797 | 45  | 3.178 |
|    |              |         | FXD | 01.10.1969 | 30.09.1970 | 1286 | -1141 | 145   | 2697 | 72  | 3.174 |
|    |              |         | FXD | 01.10.1970 | 30.09.1971 | 944  | -1702 | -758  | 3027 | 9   | 3.172 |
|    |              |         | FXD | 01.10.1971 | 30.09.1972 | 424  | -683  | -259  | 2912 | 36  | 3.171 |
|    |              |         | FXD | 01.10.1972 | 30.09.1973 | 969  | -2071 | -1102 | 3022 | 6   | 3.147 |
|    |              |         | FXD | 01.10.1973 | 30.09.1974 | 1055 | -292  | 763   | 2557 | 95  | 3.121 |
|    |              |         | FXD | 01.10.1974 | 30.09.1975 | 1089 | -767  | 322   | 2612 | 82  | 3.121 |
|    |              |         | FXD | 01.10.1975 | 30.09.1976 | 820  | -1038 | -218  | 2757 | 49  | 3.122 |
|    |              |         | FXD | 01.10.1976 | 30.09.1977 | 1191 | -769  | 422   | 2677 | 75  | 3.123 |
|    |              |         | FXD | 01.10.1977 | 30.09.1978 | 1137 | -250  | 887   | 2562 | 94  | 3.125 |
|    |              |         | FXD | 01.10.1978 | 30.09.1979 | 913  | -1062 | -149  | 2762 | 46  | 3.125 |
|    |              |         | FXD | 01.10.1979 | 30.09.1980 | 1406 | -671  | 735   | 2567 | 93  | 3.126 |
|    |              |         | FXD | 01.10.1980 | 30.09.1981 | 1395 | -916  | 479   | 2657 | 77  | 3.127 |
|    |              |         | FXD | 01.10.1981 | 30.09.1982 | 1276 | -1973 | -697  | 3042 | 10  | 3.127 |
|    |              |         | FXD | 01.10.1982 | 30.09.1983 | 1097 | -1584 | -487  | 2772 | 37  | 3.129 |
|    |              |         | FXD | 01.10.1983 | 30.09.1984 | 1011 | -294  | 717   | 2647 | 83  | 3.129 |
|    |              |         | FXD | 01.10.1984 | 30.09.1985 | 1041 | -834  | 207   | 2712 | 68  | 3.131 |
|    |              |         | FXD | 01.10.1985 | 30.09.1986 | 1075 | -1442 | -367  | 2942 | 34  | 3.137 |
|    |              |         | FXD | 01.10.1986 | 30.09.1987 | 484  | -1428 | -944  | 3091 | 2   | 3.109 |
|    |              |         | FXD | 01.10.1987 | 30.09.1988 | 1047 | -1460 | -413  | 2827 | 32  | 3.099 |
|    |              |         | FXD | 01.10.1988 | 30.09.1989 | 917  | -1310 | -393  | 2907 | 31  | 3.094 |
|    |              |         | FXD | 01.10.1989 | 30.09.1990 | 1121 | -1830 | -709  | 3047 | 19  | 3.08  |
|    |              |         | FXD | 01.10.1990 | 30.09.1991 | 870  | -2108 | -1238 | 3037 | 6   | 3.069 |
|    |              |         | FXD | 01.10.1991 | 30.09.1992 | 1883 | -3027 | -1144 | 2987 | 11  | 3.049 |
|    |              |         | FXD | 01.10.1992 | 30.09.1993 | 1781 | -2025 | -244  | 2817 | 43  | 3.036 |
|    |              |         | FXD | 01.10.1993 | 30.09.1994 | 1609 | -2317 | -708  | 2862 | 33  | 3.007 |

| NR | GLACIER NAME  | PSFG NR | SYS | FROM       | TO         | BW   | BS    | BA    | ELA  | AAR | AREA  |
|----|---------------|---------|-----|------------|------------|------|-------|-------|------|-----|-------|
|    |               |         |     | D M Y      | D M Y      | MM   | MM    | MM    | M    | %   | KM²   |
|    |               |         | FXD | 01.10.1994 | 30.09.1995 | 1213 | -1342 | -129  | 2797 | 46  | 2.975 |
|    |               |         | FXD | 01.10.1995 | 30.09.1996 | 471  | -614  | -143  | 2777 | 46  | 2.968 |
|    |               |         | FXD | 01.10.1996 | 30.09.1997 | 1500 | -1763 | -263  | 2792 | 43  | 2.961 |
|    |               |         | FXD | 01.10.1997 | 30.09.1998 | 607  | -2198 | -1591 | 3076 | 0   | 2.957 |
|    |               |         | FXD | 01.10.1998 | 30.09.1999 | 2073 | -2269 | -196  | 2782 | 45  | 2.953 |
|    |               |         | FXD | 01.10.1999 | 30.09.2000 | 1752 | -1740 | 12    | 2727 | 63  | 2.949 |
|    |               |         | FXD | 01.10.2000 | 30.09.2001 | 1587 | -914  | 673   | 2682 | 71  | 2.94  |
|    |               |         | FXD | 01.10.2001 | 30.09.2002 | 1189 | -1487 | -298  | 2757 | 57  | 2.935 |
|    |               |         | FXD | 01.10.2002 | 30.09.2003 | 1140 | -3669 | -2529 | 3073 | 0   | 2.889 |
|    |               |         | FXD | 01.10.2003 | 30.09.2004 | 1396 | -1516 | -120  | 2757 | 53  | 2.837 |
|    |               |         | FXD | 01.10.2004 | 30.09.2005 | 1101 | -2151 | -1050 | 2877 | 26  | 2.824 |
|    | <u>U.S.A.</u> |         |     |            |            |      |       |       |      |     |       |
| 4  | TAKU          | US1805  |     | 1945       | 1946       |      |       | -40   | 980  |     |       |
|    |               |         |     | 1946       | 1947       |      |       | 360   | 900  |     |       |
|    |               |         |     | 1947       | 1948       |      |       | 510   | 870  |     |       |
|    |               |         |     | 1948       | 1949       |      |       | 930   | 800  |     |       |
|    |               |         |     | 1949       | 1950       |      |       | -180  | 1010 |     |       |
|    |               |         |     | 1950       | 1951       |      |       | -340  | 1160 |     |       |
|    |               |         |     | 1951       | 1952       |      |       | 160   | 950  |     |       |
|    |               |         |     | 1952       | 1953       |      |       | -150  | 1010 |     |       |
|    |               |         |     | 1953       | 1954       |      |       | -70   | 1160 |     |       |
|    |               |         |     | 1954       | 1955       |      |       | 970   | 950  |     |       |
|    |               |         |     | 1955       | 1956       |      |       | -130  | 1010 |     |       |
|    |               |         |     | 1956       | 1957       |      |       | -40   | 980  |     |       |
|    |               |         |     | 1957       | 1958       |      |       | 210   | 780  |     |       |
|    |               |         |     | 1958       | 1959       |      |       | 350   | 1000 |     |       |
|    |               |         |     | 1959       | 1960       |      |       | 160   | 1010 |     |       |
|    |               |         |     | 1960       | 1961       |      |       | 480   | 930  |     |       |
|    |               |         |     | 1961       | 1962       |      |       | 390   | 915  |     |       |
|    |               |         |     | 1962       | 1963       |      |       | 570   | 950  |     |       |
|    |               |         |     | 1963       | 1964       |      |       | 1130  | 885  |     |       |
|    |               |         |     | 1964       | 1965       |      |       | 790   | 900  |     |       |
|    |               |         |     | 1965       | 1966       |      |       | 80    | 875  |     |       |
|    |               |         |     | 1966       | 1967       |      |       | 250   | 750  |     |       |
|    |               |         |     | 1967       | 1968       |      |       | 460   | 810  |     |       |
|    |               |         |     | 1968       | 1969       |      |       | 1170  | 965  |     |       |
|    |               |         |     | 1969       | 1970       |      |       | 760   | 930  |     |       |
|    |               |         |     | 1970       | 1971       |      |       | 630   | 885  |     |       |
|    |               |         |     | 1971       | 1972       |      |       | 420   | 730  |     |       |
|    |               |         |     | 1972       | 1973       |      |       | 520   | 825  |     |       |
|    |               |         |     | 1973       | 1974       |      |       | 580   | 850  |     |       |
|    |               |         |     | 1974       | 1975       |      |       | 850   | 800  |     |       |
|    |               |         |     | 1975       | 1976       |      |       | 660   | 850  |     |       |
|    |               |         |     | 1976       | 1977       |      |       | 470   | 885  |     |       |
|    |               |         |     | 1977       | 1978       |      |       | 310   | 915  |     |       |
|    |               |         |     | 1978       | 1979       |      |       | 140   | 950  |     |       |
|    |               |         |     | 1979       | 1980       |      |       | 540   | 870  |     |       |
|    |               |         |     | 1980       | 1981       |      |       | 120   | 980  |     |       |
|    |               |         |     | 1981       | 1982       |      |       | 150   | 950  |     |       |
|    |               |         |     | 1982       | 1983       |      |       | -420  | 1085 |     |       |
|    |               |         |     | 1983       | 1984       |      |       | 640   | 875  |     |       |
|    |               |         |     | 1984       | 1985       |      |       | 1400  | 600  |     |       |
|    |               |         |     | 1985       | 1986       |      |       | 1200  | 720  |     |       |
|    |               |         |     | 1986       | 1987       |      |       | 390   | 910  |     |       |
|    |               |         |     | 1987       | 1988       |      |       | 600   | 890  |     |       |
|    |               |         |     | 1988       | 1989       |      |       | -810  | 1115 |     |       |
|    |               |         |     | 1989       | 1990       |      |       | -450  | 1080 |     |       |
|    |               |         |     | 1990       | 1991       |      |       | 380   | 900  |     |       |
|    |               |         |     | 1991       | 1992       |      |       | 170   | 940  |     |       |
|    |               |         |     | 1992       | 1993       |      |       | -40   | 980  |     |       |



| NR | GLACIER NAME | PSFG NR | SYS | FROM  | TO    | BW | BS | BA    | ELA  | AAR | AREA |
|----|--------------|---------|-----|-------|-------|----|----|-------|------|-----|------|
|    |              |         |     | D M Y | D M Y | MM | MM | MM    | M    | %   | KM²  |
|    |              |         |     | 1993  | 1994  |    |    | 90    | 970  |     |      |
|    |              |         |     | 1994  | 1995  |    |    | -760  | 1050 |     |      |
|    |              |         |     | 1995  | 1996  |    |    | -960  | 1150 |     |      |
|    |              |         |     | 1996  | 1997  |    |    | -1340 | 1225 |     |      |
|    |              |         |     | 1997  | 1998  |    |    | -980  | 1120 |     |      |
|    |              |         |     | 1998  | 1999  |    |    | 400   | 900  |     |      |
|    |              |         |     | 1999  | 2000  |    |    | 1030  | 750  |     |      |
|    |              |         |     | 2000  | 2001  |    |    | 880   | 850  |     |      |
|    |              |         |     | 2001  | 2002  |    |    | 450   | 900  |     |      |
|    |              |         |     | 2002  | 2003  |    |    | -900  | 1100 |     |      |
|    |              |         |     | 2003  | 2004  |    |    | -230  | 975  |     |      |
|    |              |         |     | 2004  | 2005  |    |    | 20    | 950  |     |      |







WORLD GLACIER MONITORING SERVICE
MASS BALANCE VERSUS ALTITUDE
FOR SELECTED GLACIERS

TABLE CCC

|              |   |
|--------------|---|
| NR           | Record number   |
| GLACIER NAME | 15 alphabetic or numeric digits   |
| PSFG NUMBER  | 5 digits identifying glacier with alphabetic prefix denoting country  |
| YEAR         | Balance year or measurement year  |
| SYS          | System of measurement: FLO = floating-date system<br>FXD = fixed-date system<br>STR = stratigraphic system<br>COM = combined system; usually of STR and FXD according to Mayo et al. (1972)<br>OTH = Other System |
| ALTITUDE     | Altitude interval in meters above sea level   |
| AREA         | Area of altitude band and in square kilometers  |
| BW           | Specific winter balance in mm water equivalent  |
| BS           | Specific summer balance in mm water equivalent  |
| BA           | Specific annual balance in mm water equivalent  |
| SUMMARY      | Total and specific values computed from data for the individual altitude intervals  |

| NR         | GLACIER NAME     | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW | BS | BA    |
|------------|------------------|---------|------|-----|----------|------|-------|----|----|-------|
|            |                  |         |      |     | FROM     | TO   |       |    |    |       |
| ANTARCTICA |                  |         |      |     |          |      |       |    |    |       |
| 1.1        | BAHIA DEL DIABLO | AQ      | 2006 | COM | 562      | 638  | 0     |    |    | -50   |
|            |                  |         |      |     | 488      | 562  | 0     |    |    | 125   |
|            |                  |         |      |     | 412      | 488  | 0     |    |    | 50    |
|            |                  |         |      |     | 338      | 412  | 0     |    |    | -350  |
|            |                  |         |      |     | 262      | 338  | 0     |    |    | -550  |
|            |                  |         |      |     | 188      | 262  | 0     |    |    | -850  |
|            |                  |         |      |     | 112      | 188  | 0     |    |    | -1650 |
|            |                  |         |      |     | 38       | 112  | 0     |    |    | -2300 |
|            |                  |         |      |     | 38       | 638  | 14.3  |    |    | -580  |
|            |                  |         |      |     |          |      |       |    |    |       |
| 1.2        | BAHIA DEL DIABLO | AQ      | 2007 | COM | 562      | 638  | 0     |    |    | 200   |
|            |                  |         |      |     | 488      | 562  | 0     |    |    | 500   |
|            |                  |         |      |     | 412      | 488  | 0     |    |    | 150   |
|            |                  |         |      |     | 338      | 412  | 0     |    |    | 0     |
|            |                  |         |      |     | 262      | 338  | 0     |    |    | -250  |
|            |                  |         |      |     | 188      | 262  | 0     |    |    | -550  |
|            |                  |         |      |     | 112      | 188  | 0     |    |    | -1000 |
|            |                  |         |      |     | 38       | 112  | 0     |    |    | -1400 |
|            |                  |         |      |     | 38       | 638  | 14.3  |    |    | -80   |
|            |                  |         |      |     |          |      |       |    |    |       |
| 1.3        | BAHIA DEL DIABLO | AQ      | 2008 | COM | 562      | 638  | 0     |    |    | -40   |
|            |                  |         |      |     | 488      | 562  | 0     |    |    | 75    |
|            |                  |         |      |     | 412      | 488  | 0     |    |    | 50    |
|            |                  |         |      |     | 338      | 412  | 0     |    |    | -250  |
|            |                  |         |      |     | 262      | 338  | 0     |    |    | -400  |
|            |                  |         |      |     | 188      | 262  | 0     |    |    | -650  |
|            |                  |         |      |     | 112      | 188  | 0     |    |    | -1500 |
|            |                  |         |      |     | 38       | 112  | 0     |    |    | -2300 |
|            |                  |         |      |     | 38       | 638  | 14.3  |    |    | -530  |
|            |                  |         |      |     |          |      |       |    |    |       |
| 1.4        | BAHIA DEL DIABLO | AQ      | 2009 | COM | 562      | 638  | 0     |    |    | 325   |
|            |                  |         |      |     | 488      | 562  | 0     |    |    | 450   |
|            |                  |         |      |     | 412      | 488  | 0     |    |    | 300   |
|            |                  |         |      |     | 338      | 412  | 0     |    |    | -100  |
|            |                  |         |      |     | 262      | 338  | 0     |    |    | -600  |
|            |                  |         |      |     | 188      | 262  | 0     |    |    | -1200 |
|            |                  |         |      |     | 112      | 188  | 0     |    |    | -1700 |
|            |                  |         |      |     | 38       | 112  | 0     |    |    | -2000 |
|            |                  |         |      |     | 38       | 638  | 14.3  |    |    | -255  |
|            |                  |         |      |     |          |      |       |    |    |       |
| 1.5        | BAHIA DEL DIABLO | AQ      | 2010 | COM | 562      | 638  | 0     |    |    | 600   |
|            |                  |         |      |     | 488      | 562  | 0     |    |    | 400   |
|            |                  |         |      |     | 412      | 488  | 0     |    |    | 600   |
|            |                  |         |      |     | 338      | 412  | 0     |    |    | 400   |
|            |                  |         |      |     | 262      | 338  | 0     |    |    | 300   |
|            |                  |         |      |     | 188      | 262  | 0     |    |    | 100   |
|            |                  |         |      |     | 112      | 188  | 0     |    |    | 200   |
|            |                  |         |      |     | 38       | 112  | 0     |    |    | 0     |
|            |                  |         |      |     | 38       | 638  | 14.3  |    |    | 370   |
|            |                  |         |      |     |          |      |       |    |    |       |
| ARGENTINA  |                  |         |      |     |          |      |       |    |    |       |
| 2.1        | MARTIAL ESTE     | AR      | 2008 | FXD | 1160     | 1180 | 0.002 |    |    | 400   |
|            |                  |         |      |     | 1140     | 1160 | 0.005 |    |    | 460   |
|            |                  |         |      |     | 1120     | 1140 | 0.007 |    |    | 540   |
|            |                  |         |      |     | 1100     | 1120 | 0.011 |    |    | 600   |
|            |                  |         |      |     | 1080     | 1100 | 0.015 |    |    | 480   |
|            |                  |         |      |     | 1060     | 1080 | 0.016 |    |    | -90   |
|            |                  |         |      |     | 1040     | 1060 | 0.015 |    |    | -530  |
|            |                  |         |      |     | 1020     | 1040 | 0.011 |    |    | -920  |
|            |                  |         |      |     | 1000     | 1020 | 0.007 |    |    | -1000 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS   | ALTITUDE       |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-------|----------------|------|-------|------|-------|-------|
|      |              |         |      |       | FROM           | TO   | KM²   | MM   | MM    | MM    |
| 2.2  | MARTIAL ESTE | AR      | 2009 | FXD   | 980            | 1000 | 0.002 |      |       | -1130 |
|      |              |         |      |       | 960            | 980  | 0.001 |      |       | -1180 |
|      |              |         |      |       | 960            | 1180 | 0.093 | 1505 | -1561 | -56   |
|      |              |         |      |       | 1160           | 1180 | 0.002 |      |       | 175   |
|      |              |         |      |       | 1140           | 1160 | 0.005 |      |       | 190   |
|      |              |         |      |       | 1120           | 1140 | 0.007 |      |       | 230   |
|      |              |         |      |       | 1100           | 1120 | 0.011 |      |       | 340   |
|      |              |         |      |       | 1080           | 1100 | 0.015 |      |       | 210   |
|      |              |         |      |       | 1060           | 1080 | 0.016 |      |       | -100  |
|      |              |         |      |       | 1040           | 1060 | 0.015 |      |       | -280  |
|      |              |         |      |       | 1020           | 1040 | 0.011 |      |       | -780  |
|      |              |         |      |       | 1000           | 1020 | 0.007 |      |       | -840  |
|      |              |         |      |       | 980            | 1000 | 0.002 |      |       | -890  |
| 960  | 980          | 0.001   |      |       | -920           |      |       |      |       |       |
| 960  | 1180         | 0.093   | 1061 | -1180 | -119           |      |       |      |       |       |
| 2.3  | MARTIAL ESTE | AR      | 2010 | FXD   | 1160           | 1180 | 0.002 |      |       | 1580  |
|      |              |         |      |       | 1140           | 1160 | 0.005 |      |       | 1500  |
|      |              |         |      |       | 1120           | 1140 | 0.007 |      |       | 1405  |
|      |              |         |      |       | 1100           | 1120 | 0.011 |      |       | 1340  |
|      |              |         |      |       | 1080           | 1100 | 0.015 |      |       | 1280  |
|      |              |         |      |       | 1060           | 1080 | 0.016 |      |       | 1180  |
|      |              |         |      |       | 1040           | 1060 | 0.015 |      |       | 660   |
|      |              |         |      |       | 1020           | 1040 | 0.011 |      |       | 270   |
|      |              |         |      |       | 1000           | 1020 | 0.007 |      |       | -91   |
|      |              |         |      |       | 980            | 1000 | 0.002 |      |       | -235  |
|      |              |         |      |       | 960            | 980  | 0.001 |      |       | -350  |
|      |              |         |      |       | 960            | 1180 | 0.093 | 1332 | -402  | 930   |
|      |              |         |      |       | <u>AUSTRIA</u> |      |       |      |       |       |
| 3.1  | GOLDBERG K.  | AT0802B | 2006 | FXD   | 3050           | 3100 | 0.011 | 1206 | -738  | 468   |
|      |              |         |      |       | 3000           | 3050 | 0.053 | 1276 | -1214 | 61    |
|      |              |         |      |       | 2950           | 3000 | 0.093 | 1564 | -1803 | -238  |
|      |              |         |      |       | 2900           | 2950 | 0.112 | 1480 | -2086 | -606  |
|      |              |         |      |       | 2850           | 2900 | 0.072 | 1246 | -2225 | -979  |
|      |              |         |      |       | 2800           | 2850 | 0.037 | 1286 | -2186 | -900  |
|      |              |         |      |       | 2750           | 2800 | 0.026 | 1583 | -1956 | -373  |
|      |              |         |      |       | 2700           | 2750 | 0.146 | 1860 | -2154 | -294  |
|      |              |         |      |       | 2650           | 2700 | 0.469 | 1565 | -2915 | -1350 |
|      |              |         |      |       | 2600           | 2650 | 0.171 | 1671 | -3246 | -1575 |
|      |              |         |      |       | 2550           | 2600 | 0.025 | 1626 | -3218 | -1592 |
|      |              |         |      |       | 2500           | 2550 | 0.021 | 1675 | -2460 | -785  |
|      |              |         |      |       | 2450           | 2500 | 0.066 | 1787 | -2712 | -925  |
| 2400 | 2450         | 0.111   | 1566 | -3740 | -2174          |      |       |      |       |       |
| 2350 | 2400         | 0.012   | 1664 | -4674 | -3010          |      |       |      |       |       |
| 2350 | 3100         | 1.425   | 1577 | -2655 | -1077          |      |       |      |       |       |
| 3.2  | GOLDBERG K.  | AT0802B | 2007 | FXD   | 3050           | 3100 | 0.011 | 1259 | -948  | 311   |
|      |              |         |      |       | 3000           | 3050 | 0.053 | 1071 | -853  | 219   |
|      |              |         |      |       | 2950           | 3000 | 0.093 | 1188 | -1421 | -233  |
|      |              |         |      |       | 2900           | 2950 | 0.112 | 1083 | -2182 | -1098 |
|      |              |         |      |       | 2850           | 2900 | 0.072 | 889  | -2593 | -1704 |
|      |              |         |      |       | 2800           | 2850 | 0.037 | 1096 | -2396 | -1300 |
|      |              |         |      |       | 2750           | 2800 | 0.026 | 1421 | -1556 | -134  |
|      |              |         |      |       | 2700           | 2750 | 0.146 | 1576 | -1467 | 108   |
|      |              |         |      |       | 2650           | 2700 | 0.469 | 1325 | -2775 | -1450 |
|      |              |         |      |       | 2600           | 2650 | 0.171 | 1336 | -3011 | -1675 |
|      |              |         |      |       | 2550           | 2600 | 0.025 | 1321 | -2412 | -1091 |
|      |              |         |      |       | 2500           | 2550 | 0.021 | 1832 | -2396 | -564  |
|      |              |         |      |       | 2450           | 2500 | 0.066 | 1659 | -2510 | -851  |

| NR  | GLACIER NAME     | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|-----|------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|     |                  |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 3.3 | GOLDBERG K.      | AT0802B | 2008 | COM | 2400     | 2450 | 0.111 | 1175 | -3009 | -1834 |
|     |                  |         |      |     | 2350     | 2400 | 0.012 | 948  | -2813 | -1865 |
|     |                  |         |      |     | 2350     | 3100 | 1.425 | 1296 | -2402 | -1106 |
|     |                  |         |      |     | 3050     | 3100 | 0.011 | 1637 | -1674 | -37   |
|     |                  |         |      |     | 3000     | 3050 | 0.053 | 1985 | -2080 | -94   |
|     |                  |         |      |     | 2950     | 3000 | 0.093 | 2023 | -2219 | -196  |
|     |                  |         |      |     | 2900     | 2950 | 0.112 | 1846 | -2286 | -440  |
|     |                  |         |      |     | 2850     | 2900 | 0.072 | 1747 | -2518 | -771  |
|     |                  |         |      |     | 2800     | 2850 | 0.037 | 1849 | -2382 | -533  |
|     |                  |         |      |     | 2750     | 2800 | 0.026 | 2484 | -2360 | 124   |
|     |                  |         |      |     | 2700     | 2750 | 0.146 | 2651 | -2450 | 201   |
|     |                  |         |      |     | 2650     | 2700 | 0.469 | 2011 | -2760 | -749  |
|     |                  |         |      |     | 2600     | 2650 | 0.171 | 1974 | -3128 | -1154 |
|     |                  |         |      |     | 2550     | 2600 | 0.025 | 1556 | -2176 | -620  |
|     |                  |         |      |     | 2500     | 2550 | 0.021 | 2191 | -2199 | -8    |
|     |                  |         |      |     | 2450     | 2500 | 0.066 | 2460 | -2871 | -411  |
|     |                  |         |      |     | 2400     | 2450 | 0.111 | 2143 | -3856 | -1713 |
| 3.4 | GOLDBERG K.      | AT0802B | 2009 | COM | 2350     | 2400 | 0.012 | 1633 | -4160 | -2527 |
|     |                  |         |      |     | 2350     | 3100 | 1.42  | 2070 | -2721 | -651  |
|     |                  |         |      |     | 3050     | 3100 | 0.011 | 1520 | -1449 | 71    |
|     |                  |         |      |     | 3000     | 3050 | 0.053 | 1744 | -1714 | 30    |
|     |                  |         |      |     | 2950     | 3000 | 0.093 | 1688 | -1705 | -18   |
|     |                  |         |      |     | 2900     | 2950 | 0.112 | 1644 | -2159 | -515  |
|     |                  |         |      |     | 2850     | 2900 | 0.072 | 1503 | -2433 | -930  |
|     |                  |         |      |     | 2800     | 2850 | 0.037 | 1694 | -2198 | -504  |
|     |                  |         |      |     | 2750     | 2800 | 0.026 | 2381 | -2222 | 159   |
|     |                  |         |      |     | 2700     | 2750 | 0.146 | 2611 | -2414 | 197   |
|     |                  |         |      |     | 2650     | 2700 | 0.469 | 1893 | -2577 | -684  |
|     |                  |         |      |     | 2600     | 2650 | 0.171 | 1708 | -2658 | -950  |
|     |                  |         |      |     | 2550     | 2600 | 0.025 | 1384 | -2019 | -635  |
|     |                  |         |      |     | 2500     | 2550 | 0.021 | 2020 | -2169 | -149  |
|     |                  |         |      |     | 2450     | 2500 | 0.066 | 2444 | -2657 | -213  |
|     |                  |         |      |     | 2400     | 2450 | 0.111 | 2279 | -3390 | -1112 |
|     |                  |         |      |     | 2350     | 2400 | 0.012 | 1830 | -3809 | -1979 |
| 3.5 | GOLDBERG K.      | AT0802B | 2010 | COM | 2350     | 3100 | 1.42  | 1933 | -2475 | -542  |
|     |                  |         |      |     | 3050     | 3100 | 0.008 | 1468 | -1461 | 7     |
|     |                  |         |      |     | 3000     | 3050 | 0.045 | 1380 | -1344 | 36    |
|     |                  |         |      |     | 2950     | 3000 | 0.088 | 1495 | -1406 | 89    |
|     |                  |         |      |     | 2900     | 2950 | 0.103 | 1462 | -1690 | -228  |
|     |                  |         |      |     | 2850     | 2900 | 0.065 | 1330 | -2000 | -670  |
|     |                  |         |      |     | 2800     | 2850 | 0.036 | 1304 | -1927 | -623  |
|     |                  |         |      |     | 2750     | 2800 | 0.018 | 1816 | -1850 | -34   |
|     |                  |         |      |     | 2700     | 2750 | 0.105 | 1912 | -1919 | -7    |
|     |                  |         |      |     | 2650     | 2700 | 0.346 | 1590 | -2194 | -604  |
|     |                  |         |      |     | 2600     | 2650 | 0.284 | 1388 | -2907 | -1519 |
|     |                  |         |      |     | 2550     | 2600 | 0.031 | 1587 | -3304 | -1717 |
|     |                  |         |      |     | 2500     | 2550 | 0.014 | 1797 | -3103 | -1307 |
|     |                  |         |      |     | 2450     | 2500 | 0.044 | 1855 | -2204 | -349  |
|     |                  |         |      |     | 2400     | 2450 | 0.092 | 2043 | -3237 | -1194 |
|     |                  |         |      |     | 2350     | 2400 | 0.038 | 1567 | -3660 | -2094 |
|     |                  |         |      |     | 2350     | 3100 | 1.316 | 1572 | -2330 | -758  |
| 4.1 | HINTEREIS FERNER | AT0209  | 2006 | FXD | 3700     | 3750 | 0.006 |      |       | -250  |
|     |                  |         |      |     | 3650     | 3700 | 0.024 |      |       | -250  |
|     |                  |         |      |     | 3600     | 3650 | 0.028 |      |       | -250  |
|     |                  |         |      |     | 3550     | 3600 | 0.02  |      |       | -250  |
|     |                  |         |      |     | 3500     | 3550 | 0.022 |      |       | -250  |
|     |                  |         |      |     | 3450     | 3500 | 0.082 |      |       | -212  |



| NR  | GLACIER NAME     | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW | BS | BA    |
|-----|------------------|---------|------|-----|----------|------|-------|----|----|-------|
|     |                  |         |      |     | FROM     | TO   |       |    |    |       |
|     |                  |         |      |     |          |      | KM²   | MM | MM | MM    |
|     |                  |         |      |     | 3400     | 3450 | 0.131 |    |    | -145  |
|     |                  |         |      |     | 3350     | 3400 | 0.259 |    |    | -40   |
|     |                  |         |      |     | 3300     | 3350 | 0.388 |    |    | 3     |
|     |                  |         |      |     | 3250     | 3300 | 0.422 |    |    | -169  |
|     |                  |         |      |     | 3200     | 3250 | 0.467 |    |    | -368  |
|     |                  |         |      |     | 3150     | 3200 | 0.598 |    |    | -467  |
|     |                  |         |      |     | 3100     | 3150 | 0.701 |    |    | -643  |
|     |                  |         |      |     | 3050     | 3100 | 0.701 |    |    | -816  |
|     |                  |         |      |     | 3000     | 3050 | 0.541 |    |    | -1398 |
|     |                  |         |      |     | 2950     | 3000 | 0.493 |    |    | -1553 |
|     |                  |         |      |     | 2900     | 2950 | 0.493 |    |    | -1926 |
|     |                  |         |      |     | 2850     | 2900 | 0.461 |    |    | -2394 |
|     |                  |         |      |     | 2800     | 2850 | 0.249 |    |    | -2658 |
|     |                  |         |      |     | 2750     | 2800 | 0.409 |    |    | -2860 |
|     |                  |         |      |     | 2700     | 2750 | 0.277 |    |    | -3865 |
|     |                  |         |      |     | 2650     | 2700 | 0.22  |    |    | -4411 |
|     |                  |         |      |     | 2600     | 2650 | 0.215 |    |    | -4906 |
|     |                  |         |      |     | 2550     | 2600 | 0.123 |    |    | -5360 |
|     |                  |         |      |     | 2500     | 2550 | 0.055 |    |    | -6042 |
|     |                  |         |      |     | 2450     | 2500 | 0.016 |    |    | -6896 |
|     |                  |         |      |     | 2400     | 2450 | 0     |    |    | 0     |
|     |                  |         |      |     | 2400     | 3750 | 7.401 |    |    | -1516 |
| 4.2 | HINTEREIS FERNER | AT0209  | 2007 | FXD | 3700     | 3750 | 0.005 |    |    | -1250 |
|     |                  |         |      |     | 3650     | 3700 | 0.023 |    |    | -967  |
|     |                  |         |      |     | 3600     | 3650 | 0.028 |    |    | -798  |
|     |                  |         |      |     | 3550     | 3600 | 0.019 |    |    | -765  |
|     |                  |         |      |     | 3500     | 3550 | 0.021 |    |    | -855  |
|     |                  |         |      |     | 3450     | 3500 | 0.081 |    |    | -751  |
|     |                  |         |      |     | 3400     | 3450 | 0.129 |    |    | -673  |
|     |                  |         |      |     | 3350     | 3400 | 0.258 |    |    | -495  |
|     |                  |         |      |     | 3300     | 3350 | 0.388 |    |    | -537  |
|     |                  |         |      |     | 3250     | 3300 | 0.422 |    |    | -702  |
|     |                  |         |      |     | 3200     | 3250 | 0.467 |    |    | -807  |
|     |                  |         |      |     | 3150     | 3200 | 0.595 |    |    | -815  |
|     |                  |         |      |     | 3100     | 3150 | 0.695 |    |    | -917  |
|     |                  |         |      |     | 3050     | 3100 | 0.696 |    |    | -1164 |
|     |                  |         |      |     | 3000     | 3050 | 0.53  |    |    | -1764 |
|     |                  |         |      |     | 2950     | 3000 | 0.465 |    |    | -2014 |
|     |                  |         |      |     | 2900     | 2950 | 0.475 |    |    | -2174 |
|     |                  |         |      |     | 2850     | 2900 | 0.447 |    |    | -2495 |
|     |                  |         |      |     | 2800     | 2850 | 0.243 |    |    | -2577 |
|     |                  |         |      |     | 2750     | 2800 | 0.402 |    |    | -2883 |
|     |                  |         |      |     | 2700     | 2750 | 0.272 |    |    | -3969 |
|     |                  |         |      |     | 2650     | 2700 | 0.21  |    |    | -4826 |
|     |                  |         |      |     | 2600     | 2650 | 0.188 |    |    | -5207 |
|     |                  |         |      |     | 2550     | 2600 | 0.102 |    |    | -5796 |
|     |                  |         |      |     | 2500     | 2550 | 0.04  |    |    | -6764 |
|     |                  |         |      |     | 2450     | 2500 | 0.005 |    |    | -7750 |
|     |                  |         |      |     | 2400     | 2450 | 0     |    |    | 0     |
|     |                  |         |      |     | 2400     | 3750 | 7.206 |    |    | -1798 |
| 4.3 | HINTEREIS FERNER | AT0209  | 2008 | FXD | 3700     | 3750 | 0.005 |    |    | 22    |
|     |                  |         |      |     | 3650     | 3700 | 0.023 |    |    | -9    |
|     |                  |         |      |     | 3600     | 3650 | 0.028 |    |    | -51   |
|     |                  |         |      |     | 3550     | 3600 | 0.019 |    |    | 69    |
|     |                  |         |      |     | 3500     | 3550 | 0.021 |    |    | 100   |
|     |                  |         |      |     | 3450     | 3500 | 0.081 |    |    | 26    |
|     |                  |         |      |     | 3400     | 3450 | 0.129 |    |    | 17    |
|     |                  |         |      |     | 3350     | 3400 | 0.258 |    |    | 142   |
|     |                  |         |      |     | 3300     | 3350 | 0.387 |    |    | 163   |

| NR  | GLACIER NAME     | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|-----|------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|     |                  |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|     |                  |         |      |     | 3250     | 3300 | 0.421 |      |       | -1    |
|     |                  |         |      |     | 3200     | 3250 | 0.464 |      |       | -53   |
|     |                  |         |      |     | 3150     | 3200 | 0.589 |      |       | -169  |
|     |                  |         |      |     | 3100     | 3150 | 0.688 |      |       | -298  |
|     |                  |         |      |     | 3050     | 3100 | 0.687 |      |       | -566  |
|     |                  |         |      |     | 3000     | 3050 | 0.514 |      |       | -1099 |
|     |                  |         |      |     | 2950     | 3000 | 0.457 |      |       | -1536 |
|     |                  |         |      |     | 2900     | 2950 | 0.468 |      |       | -1822 |
|     |                  |         |      |     | 2850     | 2900 | 0.438 |      |       | -2210 |
|     |                  |         |      |     | 2800     | 2850 | 0.235 |      |       | -2458 |
|     |                  |         |      |     | 2750     | 2800 | 0.395 |      |       | -2680 |
|     |                  |         |      |     | 2700     | 2750 | 0.27  |      |       | -3475 |
|     |                  |         |      |     | 2650     | 2700 | 0.205 |      |       | -4471 |
|     |                  |         |      |     | 2600     | 2650 | 0.184 |      |       | -4651 |
|     |                  |         |      |     | 2550     | 2600 | 0.1   |      |       | -5157 |
|     |                  |         |      |     | 2500     | 2550 | 0.035 |      |       | -5873 |
|     |                  |         |      |     | 2450     | 2500 | 0.001 |      |       | -6250 |
|     |                  |         |      |     | 2400     | 2450 | 0     |      |       | 0     |
|     |                  |         |      |     | 2400     | 3750 | 7.102 |      |       | -1235 |
| 4.4 | HINTEREIS FERNER | AT0209  | 2009 | FXD | 3700     | 3750 | 0.032 |      |       | 63    |
|     |                  |         |      |     | 3650     | 3700 | 0.023 |      |       | 81    |
|     |                  |         |      |     | 3600     | 3650 | 0.025 |      |       | 29    |
|     |                  |         |      |     | 3550     | 3600 | 0.086 |      |       | 168   |
|     |                  |         |      |     | 3500     | 3550 | 0.162 |      |       | 230   |
|     |                  |         |      |     | 3450     | 3500 | 0.295 |      |       | 315   |
|     |                  |         |      |     | 3400     | 3450 | 0.425 |      |       | 485   |
|     |                  |         |      |     | 3350     | 3400 | 0.463 |      |       | 355   |
|     |                  |         |      |     | 3300     | 3350 | 0.516 |      |       | 228   |
|     |                  |         |      |     | 3250     | 3300 | 0.697 |      |       | 213   |
|     |                  |         |      |     | 3200     | 3250 | 0.859 |      |       | 69    |
|     |                  |         |      |     | 3150     | 3200 | 0.803 |      |       | -178  |
|     |                  |         |      |     | 3100     | 3150 | 0.639 |      |       | -456  |
|     |                  |         |      |     | 3050     | 3100 | 0.626 |      |       | -748  |
|     |                  |         |      |     | 3000     | 3050 | 0.604 |      |       | -1038 |
|     |                  |         |      |     | 2950     | 3000 | 0.507 |      |       | -1435 |
|     |                  |         |      |     | 2900     | 2950 | 0.404 |      |       | -1932 |
|     |                  |         |      |     | 2850     | 2900 | 0.609 |      |       | -2377 |
|     |                  |         |      |     | 2800     | 2850 | 0.346 |      |       | -3230 |
|     |                  |         |      |     | 2750     | 2800 | 0.37  |      |       | -3759 |
|     |                  |         |      |     | 2700     | 2750 | 0.209 |      |       | -4265 |
|     |                  |         |      |     | 2650     | 2700 | 0.118 |      |       | -4934 |
|     |                  |         |      |     | 2600     | 2650 | 0.077 |      |       | -5709 |
|     |                  |         |      |     | 2550     | 2600 | 0.037 |      |       | -3944 |
|     |                  |         |      |     | 2500     | 2550 | 0.004 |      |       |       |
|     |                  |         |      |     | 2500     | 3750 | 6.96  |      |       | -1182 |
| 4.5 | HINTEREIS FERNER | AT0209  | 2010 | FXD | 3700     | 3750 | 0.005 | 1087 | -1337 | -250  |
|     |                  |         |      |     | 3650     | 3700 | 0.023 | 1087 | -1186 | -99   |
|     |                  |         |      |     | 3600     | 3650 | 0.028 | 1443 | -1370 | 73    |
|     |                  |         |      |     | 3550     | 3600 | 0.019 | 1173 | -1048 | 125   |
|     |                  |         |      |     | 3500     | 3550 | 0.021 | 858  | -760  | 98    |
|     |                  |         |      |     | 3450     | 3500 | 0.081 | 813  | -802  | 11    |
|     |                  |         |      |     | 3400     | 3450 | 0.129 | 1066 | -1037 | 29    |
|     |                  |         |      |     | 3350     | 3400 | 0.254 | 1346 | -1229 | 117   |
|     |                  |         |      |     | 3300     | 3350 | 0.383 | 1472 | -1289 | 183   |
|     |                  |         |      |     | 3250     | 3300 | 0.417 | 1465 | -1515 | -50   |
|     |                  |         |      |     | 3200     | 3250 | 0.46  | 1290 | -1562 | -272  |
|     |                  |         |      |     | 3150     | 3200 | 0.574 | 1157 | -1491 | -334  |
|     |                  |         |      |     | 3100     | 3150 | 0.675 | 1129 | -1638 | -509  |
|     |                  |         |      |     | 3050     | 3100 | 0.652 | 1052 | -1887 | -835  |

| NR  | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|-----|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|     |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 5.1 | JAMTAL F.    | AT0106  | 2006 | FXD | 3000     | 3050 | 0.496 | 946  | -2158 | -1212 |
|     |              |         |      |     | 2950     | 3000 | 0.445 | 907  | -2418 | -1511 |
|     |              |         |      |     | 2900     | 2950 | 0.447 | 883  | -2868 | -1985 |
|     |              |         |      |     | 2850     | 2900 | 0.416 | 833  | -3383 | -2550 |
|     |              |         |      |     | 2800     | 2850 | 0.223 | 734  | -3508 | -2774 |
|     |              |         |      |     | 2750     | 2800 | 0.378 | 593  | -3778 | -3185 |
|     |              |         |      |     | 2700     | 2750 | 0.257 | 407  | -4425 | -4018 |
|     |              |         |      |     | 2650     | 2700 | 0.199 | 226  | -5089 | -4863 |
|     |              |         |      |     | 2600     | 2650 | 0.169 | 174  | -5503 | -5329 |
|     |              |         |      |     | 2550     | 2600 | 0.087 | 0    | -6136 | -6136 |
|     |              |         |      |     | 2500     | 2550 | 0.02  | 0    | -6670 | -6670 |
|     |              |         |      |     | 2500     | 3750 | 6.858 |      |       | -820  |
|     |              |         |      |     | 3100     | 3200 | 0.01  | 1010 | -1260 | -250  |
|     |              |         |      |     | 3000     | 3100 | 0.261 | 1010 | -1280 | -260  |
|     |              |         |      |     | 2900     | 3000 | 0.766 | 1070 | -1300 | -230  |
|     |              |         |      |     | 2800     | 2900 | 0.713 | 1030 | -1870 | -840  |
|     |              |         |      |     | 2700     | 2800 | 0.71  | 1030 | -2460 | -1430 |
|     |              |         |      |     | 2600     | 2700 | 0.58  | 1050 | -3100 | -2050 |
|     |              |         |      |     | 2500     | 2600 | 0.344 | 970  | -4060 | -3090 |
|     |              |         |      |     | 2400     | 2500 | 0.095 | 770  | -4790 | -4020 |
| 5.2 | JAMTAL F.    | AT0106  | 2007 | FXD | 2400     | 3200 | 3.479 | 1030 | -2430 | -1290 |
|     |              |         |      |     | 3100     | 3200 | 0.01  | 760  | -1510 | -750  |
|     |              |         |      |     | 3000     | 3100 | 0.26  | 760  | -1330 | -570  |
|     |              |         |      |     | 2900     | 3000 | 0.764 | 770  | -1390 | -620  |
|     |              |         |      |     | 2800     | 2900 | 0.705 | 800  | -1890 | -1090 |
|     |              |         |      |     | 2700     | 2800 | 0.707 | 840  | -2180 | -1340 |
|     |              |         |      |     | 2600     | 2700 | 0.573 | 800  | -3010 | -2210 |
|     |              |         |      |     | 2500     | 2600 | 0.332 | 760  | -3740 | -2980 |
|     |              |         |      |     | 2400     | 2500 | 0.08  | 790  | -4950 | -4160 |
|     |              |         |      |     | 2400     | 3200 | 3.431 | 790  | -2230 | -1439 |
| 5.3 | JAMTAL F.    | AT0106  | 2008 | FXD | 3100     | 3200 | 0.004 | 1430 | -1680 | -250  |
|     |              |         |      |     | 3000     | 3100 | 0.227 | 1430 | -1690 | -264  |
|     |              |         |      |     | 2900     | 3000 | 0.714 | 1470 | -1700 | -236  |
|     |              |         |      |     | 2800     | 2900 | 0.693 | 1410 | -2140 | -734  |
|     |              |         |      |     | 2700     | 2800 | 0.685 | 1570 | -2600 | -1028 |
|     |              |         |      |     | 2600     | 2700 | 0.565 | 1570 | -2860 | -1288 |
|     |              |         |      |     | 2500     | 2600 | 0.343 | 1410 | -3790 | -2385 |
|     |              |         |      |     | 2400     | 2500 | 0.083 | 1380 | -4570 | -3186 |
|     |              |         |      |     | 2400     | 3200 | 3.314 | 1480 | -2461 | -981  |
|     |              |         |      |     | 3100     | 3200 | 0.004 | 1399 | -1289 | 110   |
| 5.4 | JAMTAL F.    | AT0106  | 2009 | FXD | 3000     | 3100 | 0.227 | 1124 | -1289 | -165  |
|     |              |         |      |     | 2900     | 3000 | 0.711 | 1331 | -1566 | -235  |
|     |              |         |      |     | 2800     | 2900 | 0.689 | 1362 | -1775 | -413  |
|     |              |         |      |     | 2700     | 2800 | 0.673 | 1428 | -2346 | -918  |
|     |              |         |      |     | 2600     | 2700 | 0.549 | 1502 | -3239 | -1737 |
|     |              |         |      |     | 2500     | 2600 | 0.33  | 1350 | -3807 | -2457 |
|     |              |         |      |     | 2400     | 2500 | 0.068 | 1241 | -4629 | -3388 |
|     |              |         |      |     | 2400     | 3200 | 3.251 | 1348 | -2301 | -953  |
|     |              |         |      |     | 3100     | 3200 | 0.004 | 796  | -1075 | -279  |
|     |              |         |      |     | 3000     | 3100 | 0.223 | 948  | -1477 | -529  |
| 5.5 | JAMTAL F.    | AT0106  | 2010 | FXD | 2900     | 3000 | 0.705 | 974  | -1641 | -667  |
|     |              |         |      |     | 2800     | 2900 | 0.677 | 853  | -1908 | -1055 |
|     |              |         |      |     | 2700     | 2800 | 0.666 | 980  | -2378 | -1398 |
|     |              |         |      |     | 2600     | 2700 | 0.531 | 961  | -3086 | -2125 |
|     |              |         |      |     | 2500     | 2600 | 0.302 | 938  | -4128 | -3190 |
|     |              |         |      |     |          |      |       |      |       |       |
|     |              |         |      |     |          |      |       |      |       |       |

| NR  | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW  | BS    | BA    |
|-----|-------------------|---------|------|-----|----------|------|-------|-----|-------|-------|
|     |                   |         |      |     | FROM     | TO   | KM²   | MM  | MM    | MM    |
|     |                   |         |      |     | 2400     | 2500 | 0.063 | 912 | -4430 | -3518 |
|     |                   |         |      |     | 2400     | 3200 | 3.171 | 984 | -1998 | -1014 |
| 6.1 | KESSELWAND FERNER | AT0226  | 2006 | FXD | 3450     | 3500 | 0.021 |     |       | -767  |
|     |                   |         |      |     | 3400     | 3450 | 0.026 |     |       | -1190 |
|     |                   |         |      |     | 3350     | 3400 | 0.046 |     |       | -503  |
|     |                   |         |      |     | 3300     | 3350 | 0.258 |     |       | 84    |
|     |                   |         |      |     | 3250     | 3300 | 0.521 |     |       | 313   |
|     |                   |         |      |     | 3200     | 3250 | 0.83  |     |       | -56   |
|     |                   |         |      |     | 3150     | 3200 | 0.785 |     |       | -324  |
|     |                   |         |      |     | 3100     | 3150 | 0.517 |     |       | -730  |
|     |                   |         |      |     | 3050     | 3100 | 0.398 |     |       | -1273 |
|     |                   |         |      |     | 3000     | 3050 | 0.151 |     |       | -2065 |
|     |                   |         |      |     | 2950     | 3000 | 0.107 |     |       | -2524 |
|     |                   |         |      |     | 2900     | 2950 | 0.068 |     |       | -3141 |
|     |                   |         |      |     | 2850     | 2900 | 0.024 |     |       | -4466 |
|     |                   |         |      |     | 2800     | 2850 | 0.071 |     |       | -4183 |
|     |                   |         |      |     | 2750     | 2800 | 0.028 |     |       | -3750 |
|     |                   |         |      |     | 2700     | 2750 | 0     |     |       | -4250 |
|     |                   |         |      |     | 2700     | 3500 | 3.851 |     |       | -617  |
| 6.2 | KESSELWAND FERNER | AT0226  | 2007 | FXD | 3450     | 3500 | 0.021 |     |       | -501  |
|     |                   |         |      |     | 3400     | 3450 | 0.026 |     |       | -331  |
|     |                   |         |      |     | 3350     | 3400 | 0.046 |     |       | -806  |
|     |                   |         |      |     | 3300     | 3350 | 0.258 |     |       | -85   |
|     |                   |         |      |     | 3250     | 3300 | 0.602 |     |       | -38   |
|     |                   |         |      |     | 3200     | 3250 | 0.83  |     |       | -279  |
|     |                   |         |      |     | 3150     | 3200 | 0.7   |     |       | -523  |
|     |                   |         |      |     | 3100     | 3150 | 0.516 |     |       | -836  |
|     |                   |         |      |     | 3050     | 3100 | 0.399 |     |       | -1277 |
|     |                   |         |      |     | 3000     | 3050 | 0.151 |     |       | -2542 |
|     |                   |         |      |     | 2950     | 3000 | 0.106 |     |       | -3402 |
|     |                   |         |      |     | 2900     | 2950 | 0.06  |     |       | -4215 |
|     |                   |         |      |     | 2850     | 2900 | 0.023 |     |       | -5128 |
|     |                   |         |      |     | 2800     | 2850 | 0.063 |     |       | -5547 |
|     |                   |         |      |     | 2750     | 2800 | 0.014 |     |       | -6250 |
|     |                   |         |      |     | 2750     | 3500 | 3.815 |     |       | -836  |
| 6.3 | KESSELWAND FERNER | AT0226  | 2008 | FXD | 3450     | 3500 | 0.021 |     |       | 74    |
|     |                   |         |      |     | 3400     | 3450 | 0.026 |     |       | 28    |
|     |                   |         |      |     | 3350     | 3400 | 0.044 |     |       | -97   |
|     |                   |         |      |     | 3300     | 3350 | 0.256 |     |       | 170   |
|     |                   |         |      |     | 3250     | 3300 | 0.601 |     |       | 212   |
|     |                   |         |      |     | 3200     | 3250 | 0.827 |     |       | 4     |
|     |                   |         |      |     | 3150     | 3200 | 0.7   |     |       | -156  |
|     |                   |         |      |     | 3100     | 3150 | 0.515 |     |       | -325  |
|     |                   |         |      |     | 3050     | 3100 | 0.403 |     |       | -696  |
|     |                   |         |      |     | 3000     | 3050 | 0.144 |     |       | -1864 |
|     |                   |         |      |     | 2950     | 3000 | 0.104 |     |       | -3566 |
|     |                   |         |      |     | 2900     | 2950 | 0.054 |     |       | -4148 |
|     |                   |         |      |     | 2850     | 2900 | 0.021 |     |       | -5274 |
|     |                   |         |      |     | 2800     | 2850 | 0.056 |     |       | -5250 |
|     |                   |         |      |     | 2750     | 2800 | 0.005 |     |       | -5250 |
|     |                   |         |      |     | 2750     | 3500 | 3.777 |     |       | -444  |
| 6.4 | KESSELWAND FERNER | AT0226  | 2009 | FXD | 3450     | 3500 | 0.021 |     |       | -250  |
|     |                   |         |      |     | 3400     | 3450 | 0.026 |     |       | -250  |
|     |                   |         |      |     | 3350     | 3400 | 0.044 |     |       | -69   |
|     |                   |         |      |     | 3300     | 3350 | 0.256 |     |       | 34    |
|     |                   |         |      |     | 3250     | 3300 | 0.599 |     |       | 92    |
|     |                   |         |      |     | 3200     | 3250 | 0.827 |     |       | -168  |

| NR  | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|-----|-------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|     |                   |         |      |     | FROM     | TO   |       |      |       |       |
|     |                   |         |      |     |          |      | KM²   | MM   | MM    | MM    |
|     |                   |         |      |     | 3150     | 3200 | 0.7   |      |       | -562  |
|     |                   |         |      |     | 3100     | 3150 | 0.515 |      |       | -1135 |
|     |                   |         |      |     | 3050     | 3100 | 0.4   |      |       | -1604 |
|     |                   |         |      |     | 3000     | 3050 | 0.141 |      |       | -2607 |
|     |                   |         |      |     | 2950     | 3000 | 0.099 |      |       | -4260 |
|     |                   |         |      |     | 2900     | 2950 | 0.042 |      |       | -5125 |
|     |                   |         |      |     | 2850     | 2900 | 0.01  |      |       | -5448 |
|     |                   |         |      |     | 2800     | 2850 | 0.035 |      |       | -5250 |
|     |                   |         |      |     | 2750     | 2800 | 0     |      |       | -5250 |
|     |                   |         |      |     | 2750     | 3500 | 3.715 |      |       | -795  |
| 6.5 | KESSELWAND FERNER | AT0226  | 2010 | FXD | 3450     | 3500 | 0.021 |      |       | -250  |
|     |                   |         |      |     | 3400     | 3450 | 0.026 |      |       | -250  |
|     |                   |         |      |     | 3350     | 3400 | 0.044 |      |       | -124  |
|     |                   |         |      |     | 3300     | 3350 | 0.256 |      |       | 17    |
|     |                   |         |      |     | 3250     | 3300 | 0.599 |      |       | 21    |
|     |                   |         |      |     | 3200     | 3250 | 0.827 |      |       | -183  |
|     |                   |         |      |     | 3150     | 3200 | 0.7   |      |       | -601  |
|     |                   |         |      |     | 3100     | 3150 | 0.515 |      |       | -917  |
|     |                   |         |      |     | 3050     | 3100 | 0.397 |      |       | -1204 |
|     |                   |         |      |     | 3000     | 3050 | 0.133 |      |       | -2214 |
|     |                   |         |      |     | 2950     | 3000 | 0.077 |      |       | -3796 |
|     |                   |         |      |     | 2900     | 2950 | 0.033 |      |       | -5005 |
|     |                   |         |      |     | 2850     | 2900 | 0.008 |      |       | -5749 |
|     |                   |         |      |     | 2800     | 2850 | 0.023 |      |       | -5750 |
|     |                   |         |      |     | 2800     | 3500 | 3.659 |      |       | -99   |
| 7.1 | KLEINFLEISS K.    | AT0801  | 2006 | FXD | 3050     | 3100 | 0.001 | 897  | -896  | 1     |
|     |                   |         |      |     | 3000     | 3050 | 0.038 | 1066 | -1483 | -416  |
|     |                   |         |      |     | 2950     | 3000 | 0.102 | 1311 | -1793 | -482  |
|     |                   |         |      |     | 2900     | 2950 | 0.13  | 1415 | -1722 | -307  |
|     |                   |         |      |     | 2850     | 2900 | 0.243 | 1467 | -1570 | -103  |
|     |                   |         |      |     | 2800     | 2850 | 0.24  | 1144 | -2161 | -1017 |
|     |                   |         |      |     | 2750     | 2800 | 0.11  | 779  | -2427 | -1648 |
|     |                   |         |      |     | 2700     | 2750 | 0.008 | -18  | -1990 | -2008 |
|     |                   |         |      |     | 2700     | 3100 | 0.849 | 1234 | -1889 | -655  |
| 7.2 | KLEINFLEISS K.    | AT0801  | 2007 | FXD | 3050     | 3100 | 0.001 | 758  | -273  | 485   |
|     |                   |         |      |     | 3000     | 3050 | 0.038 | 856  | -890  | -34   |
|     |                   |         |      |     | 2950     | 3000 | 0.102 | 932  | -1462 | -529  |
|     |                   |         |      |     | 2900     | 2950 | 0.13  | 1116 | -1604 | -488  |
|     |                   |         |      |     | 2850     | 2900 | 0.243 | 1245 | -1436 | -191  |
|     |                   |         |      |     | 2800     | 2850 | 0.24  | 907  | -2474 | -1567 |
|     |                   |         |      |     | 2750     | 2800 | 0.11  | 595  | -2983 | -2388 |
|     |                   |         |      |     | 2700     | 2750 | 0.008 | 340  | -3042 | -2702 |
|     |                   |         |      |     | 2700     | 3100 | 0.832 | 989  | -1935 | -946  |
| 7.3 | KLEINFLEISS K.    | AT0801  | 2008 | COM | 3050     | 3100 | 0.001 | 1846 | -1496 | 351   |
|     |                   |         |      |     | 3000     | 3050 | 0.038 | 2198 | -2093 | 104   |
|     |                   |         |      |     | 2950     | 3000 | 0.102 | 2055 | -2409 | -354  |
|     |                   |         |      |     | 2900     | 2950 | 0.13  | 1823 | -2193 | -371  |
|     |                   |         |      |     | 2850     | 2900 | 0.243 | 2175 | -1999 | 176   |
|     |                   |         |      |     | 2800     | 2850 | 0.24  | 1820 | -2410 | -590  |
|     |                   |         |      |     | 2750     | 2800 | 0.11  | 1280 | -2745 | -1464 |
|     |                   |         |      |     | 2700     | 2750 | 0.008 | 957  | -2383 | -1426 |
|     |                   |         |      |     | 2700     | 3100 | 0.831 | 1534 | -2157 | -623  |
| 7.4 | KLEINFLEISS K.    | AT0801  | 2009 | COM | 3050     | 3100 | 0.001 | 1846 | -1496 | 351   |
|     |                   |         |      |     | 3000     | 3050 | 0.038 | 2198 | -2093 | 104   |
|     |                   |         |      |     | 2950     | 3000 | 0.102 | 2055 | -2409 | -354  |
|     |                   |         |      |     | 2900     | 2950 | 0.13  | 1823 | -2193 | -371  |

| NR  | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA   | BW   | BS    | BA    |
|-----|----------------|---------|------|-----|----------|------|--------|------|-------|-------|
|     |                |         |      |     | FROM     | TO   | KM²    | MM   | MM    | MM    |
| 7.5 | KLEINFLEISS K. | AT0801  | 2010 | COM | 2850     | 2900 | 0.243  | 2175 | -1999 | 176   |
|     |                |         |      |     | 2800     | 2850 | 0.24   | 1820 | -2410 | -590  |
|     |                |         |      |     | 2750     | 2800 | 0.11   | 1280 | -2745 | -1464 |
|     |                |         |      |     | 2700     | 2750 | 0.008  | 957  | -2383 | -1426 |
|     |                |         |      |     | 2700     | 3100 | 0.821  | 1887 | -2290 | -403  |
|     |                |         |      |     | 3050     | 3100 | 0      | 1030 | -914  | 116   |
|     |                |         |      |     | 3000     | 3050 | 0.033  | 1267 | -1169 | 98    |
|     |                |         |      |     | 2950     | 3000 | 0.089  | 1412 | -1353 | 59    |
|     |                |         |      |     | 2900     | 2950 | 0.111  | 1373 | -1436 | -63   |
|     |                |         |      |     | 2850     | 2900 | 0.213  | 1605 | -1398 | 206   |
| 8.1 | PASTERZE       | AT0704  | 2006 | FXD | 2800     | 2850 | 0.242  | 1364 | -1497 | -133  |
|     |                |         |      |     | 2750     | 2800 | 0.124  | 1068 | -2340 | -1272 |
|     |                |         |      |     | 2700     | 2750 | 0.018  | 755  | -2731 | -1975 |
|     |                |         |      |     | 2700     | 3100 | 0.831  | 1371 | -1587 | -216  |
|     |                |         |      |     | 3500     | 3600 | 0.003  |      |       | 62    |
|     |                |         |      |     | 3400     | 3500 | 0.191  |      |       | 112   |
|     |                |         |      |     | 3300     | 3400 | 0.704  |      |       | 196   |
|     |                |         |      |     | 3200     | 3300 | 1.679  |      |       | 235   |
|     |                |         |      |     | 3100     | 3200 | 2.868  |      |       | 307   |
|     |                |         |      |     | 3000     | 3100 | 3.089  |      |       | 217   |
| 8.2 | PASTERZE       | AT0704  | 2007 | FXD | 2900     | 3000 | 2.383  |      |       | -258  |
|     |                |         |      |     | 2800     | 2900 | 1.372  |      |       | -1650 |
|     |                |         |      |     | 2700     | 2800 | 0.853  |      |       | -1626 |
|     |                |         |      |     | 2600     | 2700 | 0.583  |      |       | -1954 |
|     |                |         |      |     | 2500     | 2600 | 0.434  |      |       | -3032 |
|     |                |         |      |     | 2400     | 2500 | 0.543  |      |       | -4515 |
|     |                |         |      |     | 2300     | 2400 | 1.138  |      |       | -4892 |
|     |                |         |      |     | 2200     | 2300 | 1.242  |      |       | -4629 |
|     |                |         |      |     | 2100     | 2200 | 0.62   |      |       | -5457 |
|     |                |         |      |     | 2000     | 2100 | 0.007  |      |       | -4039 |
| 8.3 | PASTERZE       | AT0704  | 2008 | COM | 2000     | 3600 | 17.711 |      |       | -1232 |
|     |                |         |      |     | 3500     | 3600 | 0.003  |      |       | 226   |
|     |                |         |      |     | 3400     | 3500 | 0.191  |      |       | 188   |
|     |                |         |      |     | 3300     | 3400 | 0.704  |      |       | 267   |
|     |                |         |      |     | 3200     | 3300 | 1.679  |      |       | 312   |
|     |                |         |      |     | 3100     | 3200 | 2.868  |      |       | 290   |
|     |                |         |      |     | 3000     | 3100 | 3.089  |      |       | 115   |
|     |                |         |      |     | 2900     | 3000 | 2.383  |      |       | -305  |
|     |                |         |      |     | 2800     | 2900 | 1.372  |      |       | -1621 |
|     |                |         |      |     | 2700     | 2800 | 0.853  |      |       | -1840 |
| 8.3 | PASTERZE       | AT0704  | 2008 | COM | 2600     | 2700 | 0.583  |      |       | -2527 |
|     |                |         |      |     | 2500     | 2600 | 0.434  |      |       | -3434 |
|     |                |         |      |     | 2400     | 2500 | 0.543  |      |       | -4751 |
|     |                |         |      |     | 2300     | 2400 | 1.138  |      |       | -5064 |
|     |                |         |      |     | 2200     | 2300 | 1.242  |      |       | -5179 |
|     |                |         |      |     | 2100     | 2200 | 0.62   |      |       | -5845 |
|     |                |         |      |     | 2000     | 2100 | 0.007  |      |       | -4115 |
|     |                |         |      |     | 2000     | 3600 | 17.711 |      |       | -1355 |
|     |                |         |      |     | 3500     | 3600 | 0.003  |      |       | -87   |
|     |                |         |      |     | 3400     | 3500 | 0.191  |      |       | -111  |
| 8.3 | PASTERZE       | AT0704  | 2008 | COM | 3300     | 3400 | 0.704  |      |       | -102  |
|     |                |         |      |     | 3200     | 3300 | 1.679  |      |       | -168  |
|     |                |         |      |     | 3100     | 3200 | 2.868  |      |       | -122  |
|     |                |         |      |     | 3000     | 3100 | 3.089  |      |       | -229  |
|     |                |         |      |     | 2900     | 3000 | 2.383  |      |       | -438  |
|     |                |         |      |     | 2800     | 2900 | 1.372  |      |       | -1835 |
|     |                |         |      |     | 2700     | 2800 | 0.853  |      |       | -2274 |

| NR  | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA   | BW | BS | BA    |
|-----|----------------|---------|------|-----|----------|------|--------|----|----|-------|
|     |                |         |      |     | FROM     | TO   |        |    |    |       |
|     |                |         |      |     |          |      | KM²    | MM | MM | MM    |
|     |                |         |      |     | 2600     | 2700 | 0.583  |    |    | -2727 |
|     |                |         |      |     | 2500     | 2600 | 0.434  |    |    | -3051 |
|     |                |         |      |     | 2400     | 2500 | 0.543  |    |    | -3814 |
|     |                |         |      |     | 2300     | 2400 | 1.138  |    |    | -4266 |
|     |                |         |      |     | 2200     | 2300 | 1.242  |    |    | -4408 |
|     |                |         |      |     | 2100     | 2200 | 0.62   |    |    | -4662 |
|     |                |         |      |     | 2000     | 2100 | 0.007  |    |    | -2760 |
|     |                |         |      |     | 2000     | 3600 | 17.711 |    |    | -1412 |
| 8.4 | PASTERZE       | AT0704  | 2009 | COM | 3500     | 3600 | 0.003  |    |    | -1    |
|     |                |         |      |     | 3400     | 3500 | 0.191  |    |    | 51    |
|     |                |         |      |     | 3300     | 3400 | 0.704  |    |    | 125   |
|     |                |         |      |     | 3200     | 3300 | 1.679  |    |    | 223   |
|     |                |         |      |     | 3100     | 3200 | 2.868  |    |    | 601   |
|     |                |         |      |     | 3000     | 3100 | 3.089  |    |    | 690   |
|     |                |         |      |     | 2900     | 3000 | 2.383  |    |    | -69   |
|     |                |         |      |     | 2800     | 2900 | 1.372  |    |    | -1861 |
|     |                |         |      |     | 2700     | 2800 | 0.853  |    |    | -2360 |
|     |                |         |      |     | 2600     | 2700 | 0.583  |    |    | -2307 |
|     |                |         |      |     | 2500     | 2600 | 0.434  |    |    | -2737 |
|     |                |         |      |     | 2400     | 2500 | 0.543  |    |    | -4061 |
|     |                |         |      |     | 2300     | 2400 | 1.138  |    |    | -4644 |
|     |                |         |      |     | 2200     | 2300 | 1.242  |    |    | -4813 |
|     |                |         |      |     | 2100     | 2200 | 0.62   |    |    | -5489 |
|     |                |         |      |     | 2000     | 2100 | 0.007  |    |    | -3129 |
|     |                |         |      |     | 2000     | 3600 | 17.711 |    |    | -1120 |
| 8.5 | PASTERZE       | AT0704  | 2010 | COM | 3500     | 3600 | 0.003  |    |    | 56    |
|     |                |         |      |     | 3400     | 3500 | 0.191  |    |    | 102   |
|     |                |         |      |     | 3300     | 3400 | 0.704  |    |    | 176   |
|     |                |         |      |     | 3200     | 3300 | 1.679  |    |    | 291   |
|     |                |         |      |     | 3100     | 3200 | 2.868  |    |    | 474   |
|     |                |         |      |     | 3000     | 3100 | 3.089  |    |    | 689   |
|     |                |         |      |     | 2900     | 3000 | 2.383  |    |    | 202   |
|     |                |         |      |     | 2800     | 2900 | 1.372  |    |    | -1703 |
|     |                |         |      |     | 2700     | 2800 | 0.853  |    |    | -2294 |
|     |                |         |      |     | 2600     | 2700 | 0.583  |    |    | -2167 |
|     |                |         |      |     | 2500     | 2600 | 0.434  |    |    | -2781 |
|     |                |         |      |     | 2400     | 2500 | 0.543  |    |    | -3913 |
|     |                |         |      |     | 2300     | 2400 | 1.138  |    |    | -4156 |
|     |                |         |      |     | 2200     | 2300 | 1.242  |    |    | -3980 |
|     |                |         |      |     | 2100     | 2200 | 0.62   |    |    | -5041 |
|     |                |         |      |     | 2000     | 2100 | 0.007  |    |    | -3935 |
|     |                |         |      |     | 2000     | 3600 | 17.711 |    |    | -910  |
| 9.1 | VERNAGT FERNER | AT0211  | 2006 | FXD | 3600     | 3650 | 0.002  |    |    | 3     |
|     |                |         |      |     | 3550     | 3600 | 0.006  |    |    | 33    |
|     |                |         |      |     | 3500     | 3550 | 0.014  |    |    | 94    |
|     |                |         |      |     | 3450     | 3500 | 0.157  |    |    | 162   |
|     |                |         |      |     | 3400     | 3450 | 0.186  |    |    | 45    |
|     |                |         |      |     | 3350     | 3400 | 0.21   |    |    | 22    |
|     |                |         |      |     | 3300     | 3350 | 0.374  |    |    | 12    |
|     |                |         |      |     | 3250     | 3300 | 0.855  |    |    | 39    |
|     |                |         |      |     | 3200     | 3250 | 0.928  |    |    | -100  |
|     |                |         |      |     | 3150     | 3200 | 1.139  |    |    | -323  |
|     |                |         |      |     | 3100     | 3150 | 1.248  |    |    | -679  |
|     |                |         |      |     | 3050     | 3100 | 1.072  |    |    | -1247 |
|     |                |         |      |     | 3000     | 3050 | 0.933  |    |    | -1690 |
|     |                |         |      |     | 2950     | 3000 | 0.566  |    |    | -2256 |
|     |                |         |      |     | 2900     | 2950 | 0.415  |    |    | -2706 |
|     |                |         |      |     | 2850     | 2900 | 0.171  |    |    | -3080 |

| NR  | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|-----|----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|     |                |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|     |                |         |      |     | 2800     | 2850 | 0.075 |      |       | -3647 |
|     |                |         |      |     | 2750     | 2800 | 0.009 |      |       | -3382 |
|     |                |         |      |     | 2750     | 3650 | 8.359 | 791  | -1673 | -882  |
| 9.2 | VERNAGT FERNER | AT0211  | 2007 | FXD | 3600     | 3650 | 0     |      |       | 0     |
|     |                |         |      |     | 3550     | 3600 | 0.005 |      |       | 75    |
|     |                |         |      |     | 3500     | 3550 | 0.013 |      |       | -2    |
|     |                |         |      |     | 3450     | 3500 | 0.153 |      |       | 148   |
|     |                |         |      |     | 3400     | 3450 | 0.182 |      |       | 66    |
|     |                |         |      |     | 3350     | 3400 | 0.214 |      |       | 18    |
|     |                |         |      |     | 3300     | 3350 | 0.365 |      |       | 26    |
|     |                |         |      |     | 3250     | 3300 | 0.843 |      |       | -20   |
|     |                |         |      |     | 3200     | 3250 | 0.901 |      |       | -190  |
|     |                |         |      |     | 3150     | 3200 | 1.121 |      |       | -413  |
|     |                |         |      |     | 3100     | 3150 | 1.207 |      |       | -769  |
|     |                |         |      |     | 3050     | 3100 | 1.068 |      |       | -1312 |
|     |                |         |      |     | 3000     | 3050 | 0.928 |      |       | -1793 |
|     |                |         |      |     | 2950     | 3000 | 0.572 |      |       | -2500 |
|     |                |         |      |     | 2900     | 2950 | 0.397 |      |       | -3041 |
|     |                |         |      |     | 2850     | 2900 | 0.137 |      |       | -3083 |
|     |                |         |      |     | 2800     | 2850 | 0.061 |      |       | -3645 |
|     |                |         |      |     | 2750     | 2800 | 0.005 |      |       | -3938 |
|     |                |         |      |     | 2750     | 3650 | 8.172 | 491  | -1457 | -966  |
| 9.3 | VERNAGT FERNER | AT0211  | 2008 | FXD | 3550     | 3600 | 0.005 |      |       | -20   |
|     |                |         |      |     | 3500     | 3550 | 0.013 |      |       | -4    |
|     |                |         |      |     | 3450     | 3500 | 0.153 |      |       | 145   |
|     |                |         |      |     | 3400     | 3450 | 0.182 |      |       | 67    |
|     |                |         |      |     | 3350     | 3400 | 0.214 |      |       | 37    |
|     |                |         |      |     | 3300     | 3350 | 0.365 |      |       | 18    |
|     |                |         |      |     | 3250     | 3300 | 0.843 |      |       | -7    |
|     |                |         |      |     | 3200     | 3250 | 0.901 |      |       | -136  |
|     |                |         |      |     | 3150     | 3200 | 1.121 |      |       | -352  |
|     |                |         |      |     | 3100     | 3150 | 1.207 |      |       | -601  |
|     |                |         |      |     | 3050     | 3100 | 1.068 |      |       | -1097 |
|     |                |         |      |     | 3000     | 3050 | 0.928 |      |       | -1588 |
|     |                |         |      |     | 2950     | 3000 | 0.572 |      |       | -2211 |
|     |                |         |      |     | 2900     | 2950 | 0.397 |      |       | -2792 |
|     |                |         |      |     | 2850     | 2900 | 0.137 |      |       | -3168 |
|     |                |         |      |     | 2800     | 2850 | 0.061 |      |       | -3549 |
|     |                |         |      |     | 2750     | 2800 | 0.005 |      |       | -3531 |
|     |                |         |      |     | 2750     | 3600 | 8.172 | 976  | -1819 | -843  |
| 9.4 | VERNAGT FERNER | AT0211  | 2009 | FXD | 3550     | 3600 | 0.005 |      |       | -27   |
|     |                |         |      |     | 3500     | 3550 | 0.013 |      |       | -16   |
|     |                |         |      |     | 3450     | 3500 | 0.153 |      |       | 166   |
|     |                |         |      |     | 3400     | 3450 | 0.18  |      |       | 41    |
|     |                |         |      |     | 3350     | 3400 | 0.206 |      |       | 24    |
|     |                |         |      |     | 3300     | 3350 | 0.363 |      |       | -25   |
|     |                |         |      |     | 3250     | 3300 | 0.843 |      |       | -81   |
|     |                |         |      |     | 3200     | 3250 | 0.901 |      |       | -273  |
|     |                |         |      |     | 3150     | 3200 | 1.121 |      |       | -511  |
|     |                |         |      |     | 3100     | 3150 | 1.207 |      |       | -811  |
|     |                |         |      |     | 3050     | 3100 | 1.068 |      |       | -1210 |
|     |                |         |      |     | 3000     | 3050 | 0.928 |      |       | -1662 |
|     |                |         |      |     | 2950     | 3000 | 0.572 |      |       | -2329 |
|     |                |         |      |     | 2900     | 2950 | 0.397 |      |       | -2868 |
|     |                |         |      |     | 2850     | 2900 | 0.137 |      |       | -3221 |
|     |                |         |      |     | 2800     | 2850 | 0.061 |      |       | -3602 |
|     |                |         |      |     | 2750     | 2800 | 0.005 |      |       | -3551 |
|     |                |         |      |     | 2750     | 3600 | 8.161 | 1072 | -2031 | -959  |



| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 9.5  | VERNAGT FERNER | AT0211  | 2010 | FXD | 3600     | 3650 | 0     |      |       | 0     |
|      |                |         |      |     | 3550     | 3600 | 0.004 |      |       | 66    |
|      |                |         |      |     | 3500     | 3550 | 0.011 |      |       | 103   |
|      |                |         |      |     | 3450     | 3500 | 0.147 |      |       | 217   |
|      |                |         |      |     | 3400     | 3450 | 0.174 |      |       | 127   |
|      |                |         |      |     | 3350     | 3400 | 0.207 |      |       | 43    |
|      |                |         |      |     | 3300     | 3350 | 0.34  |      |       | 48    |
|      |                |         |      |     | 3250     | 3300 | 0.814 |      |       | 91    |
|      |                |         |      |     | 3200     | 3250 | 0.891 |      |       | -67   |
|      |                |         |      |     | 3150     | 3200 | 1.111 |      |       | -233  |
|      |                |         |      |     | 3100     | 3150 | 1.159 |      |       | -511  |
|      |                |         |      |     | 3050     | 3100 | 1.034 |      |       | -916  |
|      |                |         |      |     | 3000     | 3050 | 0.911 |      |       | -1376 |
|      |                |         |      |     | 2950     | 3000 | 0.572 |      |       | -1875 |
|      |                |         |      |     | 2900     | 2950 | 0.389 |      |       | -2333 |
|      |                |         |      |     | 2850     | 2900 | 0.118 |      |       | -2861 |
|      |                |         |      |     | 2800     | 2850 | 0.035 |      |       | -3143 |
|      |                |         |      |     | 2750     | 2800 | 0     |      |       | -3113 |
|      |                |         |      |     | 2750     | 3650 | 7.916 | 146  | -927  | -680  |
| 10.1 | WURTEN K.      | AT0804  | 2006 | FXD | 3100     | 3150 | 0.003 | 1441 | -1422 | 19    |
|      |                |         |      |     | 3050     | 3100 | 0.032 | 1557 | -1654 | -97   |
|      |                |         |      |     | 3000     | 3050 | 0.073 | 1420 | -1636 | -216  |
|      |                |         |      |     | 2950     | 3000 | 0.096 | 1384 | -1693 | -309  |
|      |                |         |      |     | 2900     | 2950 | 0.065 | 1423 | -1811 | -388  |
|      |                |         |      |     | 2850     | 2900 | 0.081 | 1385 | -1601 | -216  |
|      |                |         |      |     | 2800     | 2850 | 0.079 | 1270 | -1536 | -266  |
|      |                |         |      |     | 2750     | 2800 | 0.008 | 1273 | -1599 | -326  |
|      |                |         |      |     | 2700     | 2750 | 0.045 | 1749 | -1998 | -249  |
|      |                |         |      |     | 2650     | 2700 | 0.157 | 1644 | -2074 | -430  |
|      |                |         |      |     | 2600     | 2650 | 0.123 | 1372 | -3330 | -1958 |
|      |                |         |      |     | 2550     | 2600 | 0.056 | 1194 | -4498 | -3304 |
|      |                |         |      |     | 2500     | 2550 | 0.006 | 1471 | -5253 | -3782 |
|      |                |         |      |     | 2500     | 3150 | 0.824 | 1441 | -2218 | -778  |
| 10.2 | WURTEN K.      | AT0804  | 2007 | FXD | 3100     | 3150 | 0.003 | 608  | -1594 | -986  |
|      |                |         |      |     | 3050     | 3100 | 0.032 | 937  | -1474 | -537  |
|      |                |         |      |     | 3000     | 3050 | 0.073 | 971  | -1447 | -475  |
|      |                |         |      |     | 2950     | 3000 | 0.096 | 1073 | -1641 | -568  |
|      |                |         |      |     | 2900     | 2950 | 0.065 | 1102 | -1648 | -546  |
|      |                |         |      |     | 2850     | 2900 | 0.081 | 1079 | -1577 | -498  |
|      |                |         |      |     | 2800     | 2850 | 0.079 | 1012 | -1664 | -652  |
|      |                |         |      |     | 2750     | 2800 | 0.008 | 766  | -1082 | -316  |
|      |                |         |      |     | 2700     | 2750 | 0.045 | 1147 | -2242 | -1096 |
|      |                |         |      |     | 2650     | 2700 | 0.157 | 990  | -2491 | -1501 |
|      |                |         |      |     | 2600     | 2650 | 0.123 | 677  | -2985 | -2308 |
|      |                |         |      |     | 2550     | 2600 | 0.056 | 472  | -3414 | -2942 |
|      |                |         |      |     | 2500     | 2550 | 0.005 | 574  | -3388 | -2814 |
|      |                |         |      |     | 2500     | 3150 | 0.824 | 936  | -2136 | -1201 |
| 10.3 | WURTEN K.      | AT0804  | 2008 | COM | 3100     | 3150 | 0.003 | 1672 | -2240 | -568  |
|      |                |         |      |     | 3050     | 3100 | 0.032 | 1728 | -2291 | -564  |
|      |                |         |      |     | 3000     | 3050 | 0.073 | 1813 | -2526 | -713  |
|      |                |         |      |     | 2950     | 3000 | 0.096 | 1952 | -2521 | -569  |
|      |                |         |      |     | 2900     | 2950 | 0.065 | 1773 | -2315 | -541  |
|      |                |         |      |     | 2850     | 2900 | 0.081 | 1681 | -2485 | -804  |
|      |                |         |      |     | 2800     | 2850 | 0.079 | 1705 | -2295 | -591  |
|      |                |         |      |     | 2750     | 2800 | 0.008 | 1843 | -1528 | 315   |
|      |                |         |      |     | 2700     | 2750 | 0.045 | 2170 | -2053 | 116   |
|      |                |         |      |     | 2650     | 2700 | 0.157 | 2094 | -2707 | -612  |
|      |                |         |      |     | 2600     | 2650 | 0.123 | 1477 | -3453 | -1976 |

| NR   | GLACIER NAME  | PSFG NR | YEAR | SYS | ALTITUDE |            | AREA   | BW   | BS    | BA    |      |       |  |  |      |
|------|---------------|---------|------|-----|----------|------------|--------|------|-------|-------|------|-------|--|--|------|
|      |               |         |      |     | FROM     | TO         | KM²    | MM   | MM    | MM    |      |       |  |  |      |
| 10.4 | WURTEN K.     | AT0804  | 2009 | COM | 2550     | 2600       | 0.056  | 1265 | -3958 | -2692 |      |       |  |  |      |
|      |               |         |      |     | 2500     | 2550       | 0.006  | 1773 | -4857 | -3085 |      |       |  |  |      |
|      |               |         |      |     | 2500     | 3150       | 0.82   | 1784 | -2722 | -938  |      |       |  |  |      |
|      |               |         |      |     | 3100     | 3150       | 0.003  | 1535 | -1735 | -201  |      |       |  |  |      |
|      |               |         |      |     | 3050     | 3100       | 0.032  | 1764 | -2203 | -439  |      |       |  |  |      |
|      |               |         |      |     | 3000     | 3050       | 0.073  | 1813 | -2175 | -362  |      |       |  |  |      |
|      |               |         |      |     | 2950     | 3000       | 0.096  | 1781 | -2296 | -515  |      |       |  |  |      |
|      |               |         |      |     | 2900     | 2950       | 0.065  | 1924 | -2248 | -324  |      |       |  |  |      |
|      |               |         |      |     | 2850     | 2900       | 0.081  | 1902 | -2209 | -307  |      |       |  |  |      |
|      |               |         |      |     | 2800     | 2850       | 0.079  | 1852 | -1854 | -2    |      |       |  |  |      |
|      |               |         |      |     | 2750     | 2800       | 0.008  | 2046 | -1774 | 271   |      |       |  |  |      |
|      |               |         |      |     | 2700     | 2750       | 0.045  | 2582 | -2437 | 145   |      |       |  |  |      |
|      |               |         |      |     | 2650     | 2700       | 0.157  | 2632 | -2874 | -242  |      |       |  |  |      |
|      |               |         |      |     | 2600     | 2650       | 0.123  | 2133 | -3508 | -1374 |      |       |  |  |      |
|      |               |         |      |     | 2550     | 2600       | 0.056  | 1930 | -4267 | -2338 |      |       |  |  |      |
|      |               |         |      |     | 2500     | 2550       | 0.006  | 2233 | -5024 | -2791 |      |       |  |  |      |
|      |               |         |      |     | 2500     | 3150       | 0.82   | 2086 | -2671 | -584  |      |       |  |  |      |
| 10.5 | WURTEN K.     | AT0804  | 2010 | COM | 3100     | 3150       | 0      | 774  | -714  | 60    |      |       |  |  |      |
|      |               |         |      |     | 3050     | 3100       | 0.033  | 851  | -1441 | -590  |      |       |  |  |      |
|      |               |         |      |     | 3000     | 3050       | 0.064  | 1124 | -1459 | -335  |      |       |  |  |      |
|      |               |         |      |     | 2950     | 3000       | 0.094  | 1316 | -1734 | -418  |      |       |  |  |      |
|      |               |         |      |     | 2900     | 2950       | 0.066  | 1231 | -1497 | -266  |      |       |  |  |      |
|      |               |         |      |     | 2850     | 2900       | 0.069  | 1240 | -1426 | -186  |      |       |  |  |      |
|      |               |         |      |     | 2800     | 2850       | 0.085  | 1080 | -1180 | -101  |      |       |  |  |      |
|      |               |         |      |     | 2750     | 2800       | 0.012  | 2312 | -2169 | 143   |      |       |  |  |      |
|      |               |         |      |     | 2700     | 2750       | 0.024  | 2376 | -2324 | 52    |      |       |  |  |      |
|      |               |         |      |     | 2650     | 2700       | 0.129  | 1669 | -2023 | -355  |      |       |  |  |      |
|      |               |         |      |     | 2600     | 2650       | 0.121  | 1452 | -2445 | -993  |      |       |  |  |      |
|      |               |         |      |     | 2550     | 2600       | 0.066  | 1244 | -2812 | -1568 |      |       |  |  |      |
|      |               |         |      |     | 2500     | 2550       | 0.007  | 1622 | -3840 | -2218 |      |       |  |  |      |
|      |               |         |      |     | 2500     | 3150       | 0.77   | 1366 | -1885 | -519  |      |       |  |  |      |
|      |               |         |      |     | BOLIVIA  |            |        |      |       |       |      |       |  |  |      |
|      |               |         |      |     | 11.1     | CHACALTAYA | BO5180 | 2006 | OTH   | 5325  | 5350 | 0.002 |  |  | -557 |
|      |               |         |      |     |          |            |        |      |       | 5300  | 5325 | 0.003 |  |  | -624 |
| 5275 | 5300          | 0       |      |     |          |            |        |      |       | -737  |      |       |  |  |      |
| 5250 | 5275          | 0       |      |     |          |            |        |      |       | -2215 |      |       |  |  |      |
| 5225 | 5250          | 0.002   |      |     |          |            |        |      |       | -1805 |      |       |  |  |      |
| 5200 | 5225          | 0       |      |     |          |            |        |      |       | -1254 |      |       |  |  |      |
| 5200 | 5350          | 0.007   |      |     |          |            |        |      |       | -1199 |      |       |  |  |      |
| 11.2 | CHACALTAYA    | BO5180  | 2007 | OTH | 5325     | 5350       | 0.001  |      |       | -1185 |      |       |  |  |      |
|      |               |         |      |     | 5300     | 5325       | 0.001  |      |       | -1124 |      |       |  |  |      |
|      |               |         |      |     | 5250     | 5275       | 0      |      |       | -3198 |      |       |  |  |      |
|      |               |         |      |     | 5225     | 5250       | 0.001  |      |       | -2338 |      |       |  |  |      |
|      |               |         |      |     | 5200     | 5225       | 0      |      |       | -312  |      |       |  |  |      |
|      |               |         |      |     | 5200     | 5350       | 0.003  |      |       | -1652 |      |       |  |  |      |
| 11.3 | CHACALTAYA    | BO5180  | 2008 | OTH | 5325     | 5350       | 0.001  |      |       | -971  |      |       |  |  |      |
|      |               |         |      |     | 5300     | 5325       | 0      |      |       | -808  |      |       |  |  |      |
|      |               |         |      |     | 5225     | 5250       | 0      |      |       | -2868 |      |       |  |  |      |
|      |               |         |      |     | 5225     | 5350       | 0.001  |      |       | -1549 |      |       |  |  |      |
| 12.1 | CHARQUINI SUR | BO      | 2006 | FXD | 5200     | 5250       | 0.064  |      |       | 57    |      |       |  |  |      |
|      |               |         |      |     | 5150     | 5200       | 0.077  |      |       | 16    |      |       |  |  |      |
|      |               |         |      |     | 5100     | 5150       | 0.115  |      |       | -8    |      |       |  |  |      |
|      |               |         |      |     | 5050     | 5100       | 0.066  |      |       | -126  |      |       |  |  |      |
|      |               |         |      |     | 4950     | 5050       | 0.04   |      |       | -315  |      |       |  |  |      |
|      |               |         |      |     | 4950     | 5250       | 0.363  |      |       | -376  |      |       |  |  |      |

| NR   | GLACIER NAME  | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW | BS | BA    |
|------|---------------|---------|------|-----|----------|------|-------|----|----|-------|
|      |               |         |      |     | FROM     | TO   |       |    |    |       |
|      |               |         |      |     |          |      | KM²   | MM | MM | MM    |
| 12.2 | CHARQUINI SUR | BO      | 2007 | FXD | 5200     | 5250 | 0.064 |    |    | 64    |
|      |               |         |      |     | 5150     | 5200 | 0.076 |    |    | -50   |
|      |               |         |      |     | 5100     | 5150 | 0.116 |    |    | -113  |
|      |               |         |      |     | 5050     | 5100 | 0.061 |    |    | -245  |
|      |               |         |      |     | 4950     | 5050 | 0.02  |    |    | -138  |
|      |               |         |      |     | 4950     | 5250 | 0.345 |    |    | -482  |
| 12.3 | CHARQUINI SUR | BO      | 2008 | FXD | 5200     | 5300 | 0.063 |    |    | 683   |
|      |               |         |      |     | 5150     | 5200 | 0.076 |    |    | 516   |
|      |               |         |      |     | 5100     | 5150 | 0.115 |    |    | 303   |
|      |               |         |      |     | 5050     | 5100 | 0.06  |    |    | -156  |
|      |               |         |      |     | 4950     | 5050 | 0.025 |    |    | -683  |
|      |               |         |      |     | 4950     | 5300 | 0.339 |    |    | 161   |
| 12.4 | CHARQUINI SUR | BO      | 2009 | FXD | 5200     | 5300 | 0.057 |    |    | 68    |
|      |               |         |      |     | 5150     | 5200 | 0.072 |    |    | -341  |
|      |               |         |      |     | 5100     | 5150 | 0.111 |    |    | -697  |
|      |               |         |      |     | 5050     | 5100 | 0.056 |    |    | -385  |
|      |               |         |      |     | 4950     | 5050 | 0.023 |    |    | -262  |
|      |               |         |      |     | 4950     | 5300 | 0.319 |    |    | -1617 |
| 12.5 | CHARQUINI SUR | BO      | 2010 | FXD | 5200     | 5300 | 0.057 |    |    | 97    |
|      |               |         |      |     | 5150     | 5200 | 0.072 |    |    | -797  |
|      |               |         |      |     | 5100     | 5150 | 0.111 |    |    | -1122 |
|      |               |         |      |     | 5050     | 5100 | 0.056 |    |    | -737  |
|      |               |         |      |     | 4950     | 5050 | 0.023 |    |    | -361  |
|      |               |         |      |     | 4950     | 5300 | 0.319 |    |    | -2921 |
| 13.1 | ZONGO         | BO5150  | 2006 | FXD | 5900     | 6000 | 0.036 |    |    | 12    |
|      |               |         |      |     | 5800     | 5900 | 0.078 |    |    | 27    |
|      |               |         |      |     | 5700     | 5800 | 0.139 |    |    | 42    |
|      |               |         |      |     | 5600     | 5700 | 0.235 |    |    | 61    |
|      |               |         |      |     | 5500     | 5600 | 0.262 |    |    | 58    |
|      |               |         |      |     | 5400     | 5500 | 0.234 |    |    | 50    |
|      |               |         |      |     | 5300     | 5400 | 0.179 |    |    | 37    |
|      |               |         |      |     | 5200     | 5300 | 0.159 |    |    | 32    |
|      |               |         |      |     | 5100     | 5200 | 0.221 |    |    | -64   |
|      |               |         |      |     | 5000     | 5100 | 0.276 |    |    | -268  |
|      |               |         |      |     | 4900     | 5000 | 0.063 |    |    | -183  |
|      |               |         |      |     | 4900     | 6000 | 1.881 |    |    | -197  |
| 13.2 | ZONGO         | BO5150  | 2007 | FXD | 5900     | 6000 | 0.036 |    |    | 23    |
|      |               |         |      |     | 5800     | 5900 | 0.078 |    |    | 50    |
|      |               |         |      |     | 5700     | 5800 | 0.139 |    |    | 89    |
|      |               |         |      |     | 5600     | 5700 | 0.235 |    |    | 119   |
|      |               |         |      |     | 5500     | 5600 | 0.262 |    |    | 111   |
|      |               |         |      |     | 5400     | 5500 | 0.234 |    |    | 71    |
|      |               |         |      |     | 5300     | 5400 | 0.179 |    |    | 33    |
|      |               |         |      |     | 5200     | 5300 | 0.159 |    |    | -8    |
|      |               |         |      |     | 5100     | 5200 | 0.223 |    |    | -61   |
|      |               |         |      |     | 5000     | 5100 | 0.269 |    |    | -390  |
|      |               |         |      |     | 4900     | 5000 | 0.058 |    |    | -210  |
|      |               |         |      |     | 4900     | 6000 | 1.871 |    |    | -173  |
| 13.3 | ZONGO         | BO5150  | 2008 | FXD | 5900     | 6000 | 0.036 |    |    | 934   |
|      |               |         |      |     | 5800     | 5900 | 0.079 |    |    | 934   |
|      |               |         |      |     | 5700     | 5800 | 0.139 |    |    | 934   |
|      |               |         |      |     | 5600     | 5700 | 0.235 |    |    | 870   |
|      |               |         |      |     | 5500     | 5600 | 0.262 |    |    | 856   |
|      |               |         |      |     | 5400     | 5500 | 0.234 |    |    | 751   |
|      |               |         |      |     | 5300     | 5400 | 0.179 |    |    | 647   |



| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW | BS | BA    |
|------|--------------|---------|------|-----|----------|------|-------|----|----|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM | MM | MM    |
|      |              |         |      |     | 900      | 1000 | 2.66  |    |    | -1277 |
|      |              |         |      |     | 800      | 900  | 2.02  |    |    | -1636 |
|      |              |         |      |     | 700      | 800  | 1.41  |    |    | -1991 |
|      |              |         |      |     | 600      | 700  | 1.49  |    |    | -2332 |
|      |              |         |      |     | 500      | 600  | 0.98  |    |    | -2649 |
|      |              |         |      |     | 400      | 500  | 0.8   |    |    | -2932 |
|      |              |         |      |     | 300      | 400  | 1.1   |    |    | -3173 |
|      |              |         |      |     | 200      | 300  | 0.92  |    |    | -3360 |
|      |              |         |      |     | 100      | 200  | 0.52  |    |    | -3483 |
|      |              |         |      |     | 56       | 100  | 0.02  |    |    | -3507 |
|      |              |         |      |     | 56       | 1782 | 39.38 |    |    | -818  |
| 14.3 | WHITE        | CA2340  | 2008 |     | 1700     | 1782 | 0.15  |    |    | 365   |
|      |              |         |      |     | 1600     | 1700 | 0.46  |    |    | 365   |
|      |              |         |      |     | 1500     | 1600 | 1.76  |    |    | 359   |
|      |              |         |      |     | 1400     | 1500 | 4.25  |    |    | 153   |
|      |              |         |      |     | 1300     | 1400 | 6.25  |    |    | -147  |
|      |              |         |      |     | 1200     | 1300 | 5.85  |    |    | -446  |
|      |              |         |      |     | 1100     | 1200 | 5.16  |    |    | -740  |
|      |              |         |      |     | 1000     | 1100 | 3.59  |    |    | -1027 |
|      |              |         |      |     | 900      | 1000 | 2.66  |    |    | -1301 |
|      |              |         |      |     | 800      | 900  | 2.02  |    |    | -1560 |
|      |              |         |      |     | 700      | 800  | 1.41  |    |    | -1800 |
|      |              |         |      |     | 600      | 700  | 1.49  |    |    | -2018 |
|      |              |         |      |     | 500      | 600  | 0.98  |    |    | -2209 |
|      |              |         |      |     | 400      | 500  | 0.8   |    |    | -2370 |
|      |              |         |      |     | 300      | 400  | 1.1   |    |    | -2497 |
|      |              |         |      |     | 200      | 300  | 0.92  |    |    | -2587 |
|      |              |         |      |     | 100      | 200  | 0.52  |    |    | -2636 |
|      |              |         |      |     | 85       | 100  | 0.02  |    |    | -2645 |
|      |              |         |      |     | 85       | 1782 | 39.38 |    |    | -817  |
| 14.4 | WHITE        | CA2340  | 2009 |     | 1700     | 1782 | 0.15  |    |    | 309   |
|      |              |         |      |     | 1600     | 1700 | 0.46  |    |    | 309   |
|      |              |         |      |     | 1500     | 1600 | 1.76  |    |    | 306   |
|      |              |         |      |     | 1400     | 1500 | 4.25  |    |    | 204   |
|      |              |         |      |     | 1300     | 1400 | 6.25  |    |    | 28    |
|      |              |         |      |     | 1200     | 1300 | 5.85  |    |    | -180  |
|      |              |         |      |     | 1100     | 1200 | 5.16  |    |    | -411  |
|      |              |         |      |     | 1000     | 1100 | 3.59  |    |    | -660  |
|      |              |         |      |     | 900      | 1000 | 2.66  |    |    | -920  |
|      |              |         |      |     | 800      | 900  | 2.02  |    |    | -1183 |
|      |              |         |      |     | 700      | 800  | 1.41  |    |    | -1443 |
|      |              |         |      |     | 600      | 700  | 1.49  |    |    | -1693 |
|      |              |         |      |     | 500      | 600  | 0.98  |    |    | -1927 |
|      |              |         |      |     | 400      | 500  | 0.8   |    |    | -2137 |
|      |              |         |      |     | 300      | 400  | 1.1   |    |    | -2318 |
|      |              |         |      |     | 200      | 300  | 0.92  |    |    | -2461 |
|      |              |         |      |     | 100      | 200  | 0.52  |    |    | -2560 |
|      |              |         |      |     | 85       | 100  | 0.02  |    |    | -2587 |
|      |              |         |      |     | 89       | 1782 | 39.38 |    |    | -580  |
| 14.5 | WHITE        | CA2340  | 2010 |     | 1700     | 1782 | 0.15  |    |    | 381   |
|      |              |         |      |     | 1600     | 1700 | 0.46  |    |    | 381   |
|      |              |         |      |     | 1500     | 1600 | 1.76  |    |    | 381   |
|      |              |         |      |     | 1400     | 1500 | 4.25  |    |    | 352   |
|      |              |         |      |     | 1300     | 1400 | 6.25  |    |    | 278   |
|      |              |         |      |     | 1200     | 1300 | 5.85  |    |    | 167   |
|      |              |         |      |     | 1100     | 1200 | 5.16  |    |    | 24    |
|      |              |         |      |     | 1000     | 1100 | 3.59  |    |    | -147  |
|      |              |         |      |     | 900      | 1000 | 2.66  |    |    | -342  |

| NR           | GLACIER NAME         | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|--------------|----------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|              |                      |         |      |     | FROM     | TO   |       |      |       |       |
|              |                      |         |      |     |          |      | KM²   | MM   | MM    | MM    |
|              |                      |         |      |     | 800      | 900  | 2.02  |      |       | -557  |
|              |                      |         |      |     | 700      | 800  | 1.41  |      |       | -788  |
|              |                      |         |      |     | 600      | 700  | 1.49  |      |       | -1031 |
|              |                      |         |      |     | 500      | 600  | 0.98  |      |       | -1281 |
|              |                      |         |      |     | 400      | 500  | 0.8   |      |       | -1534 |
|              |                      |         |      |     | 300      | 400  | 1.1   |      |       | -1786 |
|              |                      |         |      |     | 200      | 300  | 0.92  |      |       | -2033 |
|              |                      |         |      |     | 100      | 200  | 0.52  |      |       | -2270 |
|              |                      |         |      |     | 85       | 100  | 0.02  |      |       | -2354 |
|              |                      |         |      |     | 85       | 1782 | 39.38 |      |       | -188  |
| <u>CHINA</u> |                      |         |      |     |          |      |       |      |       |       |
| 15.1         | URUMQI GLACIER NO. 1 | CN0010  | 2006 | FXD | 4400     | 4484 | 0.031 |      |       | 251   |
|              |                      |         |      |     | 4350     | 4400 | 0.033 |      |       | 306   |
|              |                      |         |      |     | 4300     | 4350 | 0.044 |      |       | 324   |
|              |                      |         |      |     | 4250     | 4300 | 0.035 |      |       | 330   |
|              |                      |         |      |     | 4200     | 4267 | 0.067 |      |       | 356   |
|              |                      |         |      |     | 4150     | 4200 | 0.102 |      |       | 307   |
|              |                      |         |      |     | 4100     | 4150 | 0.133 |      |       | 112   |
|              |                      |         |      |     | 4050     | 4100 | 0.207 |      |       | -179  |
|              |                      |         |      |     | 4000     | 4050 | 0.259 |      |       | -520  |
|              |                      |         |      |     | 3950     | 4000 | 0.229 |      |       | -983  |
|              |                      |         |      |     | 3900     | 3950 | 0.25  |      |       | -1319 |
|              |                      |         |      |     | 3850     | 3900 | 0.143 |      |       | -1964 |
|              |                      |         |      |     | 3800     | 3850 | 0.087 |      |       | -2685 |
|              |                      |         |      |     | 3742     | 3800 | 0.057 |      |       | -3392 |
|              |                      |         |      |     | 3742     | 4484 | 1.677 |      |       | -774  |
| 15.2         | URUMQI GLACIER NO. 1 | CN0010  | 2007 | FXD | 4400     | 4484 | 0.031 |      |       | 234   |
|              |                      |         |      |     | 4350     | 4400 | 0.033 |      |       | 288   |
|              |                      |         |      |     | 4300     | 4350 | 0.044 |      |       | 324   |
|              |                      |         |      |     | 4250     | 4300 | 0.035 |      |       | 353   |
|              |                      |         |      |     | 4200     | 4267 | 0.067 |      |       | 370   |
|              |                      |         |      |     | 4150     | 4200 | 0.102 |      |       | 295   |
|              |                      |         |      |     | 4100     | 4150 | 0.133 |      |       | 119   |
|              |                      |         |      |     | 4050     | 4100 | 0.207 |      |       | -222  |
|              |                      |         |      |     | 4000     | 4050 | 0.259 |      |       | -350  |
|              |                      |         |      |     | 3950     | 4000 | 0.229 |      |       | -767  |
|              |                      |         |      |     | 3900     | 3950 | 0.25  |      |       | -1162 |
|              |                      |         |      |     | 3850     | 3900 | 0.143 |      |       | -1661 |
|              |                      |         |      |     | 3800     | 3850 | 0.087 |      |       | -2067 |
|              |                      |         |      |     | 3742     | 3800 | 0.057 |      |       | -3305 |
|              |                      |         |      |     | 3742     | 4484 | 1.677 |      |       | -642  |
| 15.3         | URUMQI GLACIER NO. 1 | CN0010  | 2008 | FXD | 4450     | 4484 | 0.008 | 201  | -165  | 36    |
|              |                      |         |      |     | 4400     | 4450 | 0.021 | 224  | -166  | 58    |
|              |                      |         |      |     | 4350     | 4400 | 0.033 | 251  | -169  | 82    |
|              |                      |         |      |     | 4300     | 4350 | 0.043 | 280  | -185  | 95    |
|              |                      |         |      |     | 4250     | 4300 | 0.035 | 312  | -199  | 113   |
|              |                      |         |      |     | 4200     | 4250 | 0.063 | 293  | -77   | 216   |
|              |                      |         |      |     | 4150     | 4200 | 0.112 | 276  | -217  | 59    |
|              |                      |         |      |     | 4100     | 4150 | 0.129 | 284  | -506  | -222  |
|              |                      |         |      |     | 4050     | 4100 | 0.207 | 275  | -836  | -561  |
|              |                      |         |      |     | 4000     | 4050 | 0.261 | 239  | -992  | -753  |
|              |                      |         |      |     | 3950     | 4000 | 0.23  | 134  | -1190 | -1056 |
|              |                      |         |      |     | 3900     | 3950 | 0.25  | 49   | -1444 | -1395 |
|              |                      |         |      |     | 3850     | 3900 | 0.143 | -99  | -1795 | -1894 |
|              |                      |         |      |     | 3800     | 3850 | 0.087 | -328 | -2180 | -2508 |
|              |                      |         |      |     | 3742     | 3800 | 0.056 | -793 | -2634 | -3427 |
|              |                      |         |      |     | 3742     | 4484 | 1.677 | 121  | -1052 | -931  |

| NR   | GLACIER NAME          | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                       |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 15.4 | URUMQI GLACIER NO. 1  | CN0010  | 2009 | FXD | 4400     | 4484 | 0.008 | 193  | 318   | 511   |
|      |                       |         |      |     | 4350     | 4400 | 0.025 | 214  | 346   | 560   |
|      |                       |         |      |     | 4300     | 4350 | 0.047 | 240  | 381   | 621   |
|      |                       |         |      |     | 4250     | 4300 | 0.04  | 266  | 415   | 681   |
|      |                       |         |      |     | 4200     | 4250 | 0.055 | 291  | 442   | 733   |
|      |                       |         |      |     | 4150     | 4200 | 0.129 | 286  | 357   | 643   |
|      |                       |         |      |     | 4100     | 4150 | 0.2   | 285  | 214   | 499   |
|      |                       |         |      |     | 4050     | 4100 | 0.241 | 280  | 165   | 445   |
|      |                       |         |      |     | 4000     | 4050 | 0.239 | 274  | -41   | 233   |
|      |                       |         |      |     | 3950     | 4000 | 0.191 | 280  | -424  | -144  |
|      |                       |         |      |     | 3900     | 3950 | 0.202 | 254  | -595  | -341  |
|      |                       |         |      |     | 3850     | 3900 | 0.157 | 230  | -829  | -599  |
|      |                       |         |      |     | 3800     | 3850 | 0.077 | 151  | -1383 | -1232 |
|      |                       |         |      |     | 3743     | 3800 | 0.033 | -279 | -2033 | -2312 |
|      |                       |         |      |     | 3743     | 4484 | 1.645 | 254  | -191  | 63    |
| 15.5 | URUMQI GLACIER NO. 1  | CN0010  | 2010 | FXD | 4400     | 4484 | 0.008 | 115  | -501  | -386  |
|      |                       |         |      |     | 4350     | 4400 | 0.025 | 127  | -517  | -390  |
|      |                       |         |      |     | 4300     | 4350 | 0.047 | 142  | -542  | -400  |
|      |                       |         |      |     | 4250     | 4300 | 0.04  | 157  | -569  | -412  |
|      |                       |         |      |     | 4200     | 4250 | 0.055 | 172  | -645  | -473  |
|      |                       |         |      |     | 4150     | 4200 | 0.129 | 168  | -843  | -675  |
|      |                       |         |      |     | 4100     | 4150 | 0.2   | 168  | -1033 | -865  |
|      |                       |         |      |     | 4050     | 4100 | 0.241 | 162  | -1252 | -1090 |
|      |                       |         |      |     | 4000     | 4050 | 0.239 | 142  | -1463 | -1321 |
|      |                       |         |      |     | 3950     | 4000 | 0.191 | 120  | -1612 | -1492 |
|      |                       |         |      |     | 3900     | 3950 | 0.202 | 67   | -1833 | -1766 |
|      |                       |         |      |     | 3850     | 3900 | 0.157 | -1   | -2053 | -2054 |
|      |                       |         |      |     | 3800     | 3850 | 0.077 | -140 | -2404 | -2544 |
|      |                       |         |      |     | 3743     | 3800 | 0.033 | -417 | -2941 | -3358 |
|      |                       |         |      |     | 3743     | 4484 | 1.645 | 102  | -1429 | -1327 |
| 16.1 | URUMQI NO. 1 E-BRANCH | CN0001  | 2006 | FXD | 4150     | 4267 | 0.101 |      |       | 335   |
|      |                       |         |      |     | 4100     | 4150 | 0.081 |      |       | 124   |
|      |                       |         |      |     | 4050     | 4100 | 0.096 |      |       | -71   |
|      |                       |         |      |     | 4000     | 4050 | 0.172 |      |       | -381  |
|      |                       |         |      |     | 3950     | 4000 | 0.163 |      |       | -691  |
|      |                       |         |      |     | 3900     | 3950 | 0.211 |      |       | -1131 |
|      |                       |         |      |     | 3850     | 3900 | 0.118 |      |       | -1800 |
|      |                       |         |      |     | 3800     | 3850 | 0.087 |      |       | -2685 |
|      |                       |         |      |     | 3742     | 3800 | 0.057 |      |       | -3392 |
|      |                       |         |      |     | 3742     | 4267 | 1.086 |      |       | -920  |
| 16.2 | URUMQI NO. 1 E-BRANCH | CN0001  | 2007 | FXD | 4150     | 4267 | 0.101 |      |       | 349   |
|      |                       |         |      |     | 4100     | 4150 | 0.081 |      |       | 250   |
|      |                       |         |      |     | 4050     | 4100 | 0.096 |      |       | 100   |
|      |                       |         |      |     | 4000     | 4050 | 0.172 |      |       | -108  |
|      |                       |         |      |     | 3950     | 4000 | 0.163 |      |       | -462  |
|      |                       |         |      |     | 3900     | 3950 | 0.211 |      |       | -977  |
|      |                       |         |      |     | 3850     | 3900 | 0.118 |      |       | -1427 |
|      |                       |         |      |     | 3800     | 3850 | 0.087 |      |       | -2068 |
|      |                       |         |      |     | 3742     | 3800 | 0.057 |      |       | -3305 |
| 16.3 | URUMQI NO. 1 E-BRANCH | CN0001  | 2008 | FXD | 4200     | 4267 | 0.032 | 243  | 73    | 316   |
|      |                       |         |      |     | 4150     | 4200 | 0.077 | 244  | -135  | 109   |
|      |                       |         |      |     | 4100     | 4150 | 0.077 | 248  | -404  | -156  |
|      |                       |         |      |     | 4050     | 4100 | 0.094 | 248  | -650  | -402  |
|      |                       |         |      |     | 4000     | 4050 | 0.171 | 225  | -835  | -610  |
|      |                       |         |      |     | 3950     | 4000 | 0.163 | 189  | -1029 | -840  |
|      |                       |         |      |     | 3900     | 3950 | 0.211 | 108  | -1358 | -1250 |

| NR   | GLACIER NAME          | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                       |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                       |         |      |     | 3850     | 3900 | 0.118 | -1   | -1716 | -1717 |
|      |                       |         |      |     | 3800     | 3850 | 0.087 | -328 | -2180 | -2508 |
|      |                       |         |      |     | 3742     | 3800 | 0.056 | -793 | -2634 | -3427 |
|      |                       |         |      |     | 3742     | 4267 | 1.086 | 84   | -1130 | -1046 |
| 16.4 | URUMQI NO. 1 E-BRANCH | CN0001  | 2009 | FXD | 4200     | 4267 | 0.022 | 286  | 432   | 718   |
|      |                       |         |      |     | 4150     | 4200 | 0.088 | 279  | 321   | 600   |
|      |                       |         |      |     | 4100     | 4150 | 0.127 | 281  | 182   | 463   |
|      |                       |         |      |     | 4050     | 4100 | 0.132 | 291  | 77    | 368   |
|      |                       |         |      |     | 4000     | 4050 | 0.141 | 290  | -117  | 173   |
|      |                       |         |      |     | 3950     | 4000 | 0.137 | 320  | -305  | 15    |
|      |                       |         |      |     | 3900     | 3950 | 0.166 | 306  | -455  | -149  |
|      |                       |         |      |     | 3850     | 3900 | 0.144 | 272  | -741  | -469  |
|      |                       |         |      |     | 3800     | 3850 | 0.077 | 151  | -1383 | -1232 |
|      |                       |         |      |     | 3743     | 3800 | 0.033 | -279 | -2033 | -2312 |
|      |                       |         |      |     | 3743     | 4267 | 1.068 | 269  | -326  | -57   |
| 16.5 | URUMQI NO. 1 E-BRANCH | CN0001  | 2010 | FXD | 4200     | 4267 | 0.022 | 169  | -695  | -526  |
|      |                       |         |      |     | 4150     | 4200 | 0.088 | 164  | -880  | -716  |
|      |                       |         |      |     | 4100     | 4150 | 0.127 | 165  | -1056 | -891  |
|      |                       |         |      |     | 4050     | 4100 | 0.132 | 171  | -1208 | -1037 |
|      |                       |         |      |     | 4000     | 4050 | 0.141 | 168  | -1409 | -1241 |
|      |                       |         |      |     | 3950     | 4000 | 0.137 | 184  | -1498 | -1314 |
|      |                       |         |      |     | 3900     | 3950 | 0.166 | 124  | -1738 | -1614 |
|      |                       |         |      |     | 3850     | 3900 | 0.144 | 31   | -1999 | -1968 |
|      |                       |         |      |     | 3800     | 3850 | 0.077 | -140 | -2404 | -2544 |
|      |                       |         |      |     | 3743     | 3800 | 0.033 | -417 | -2941 | -3358 |
|      |                       |         |      |     | 3743     | 4267 | 1.068 | 105  | -1546 | -1441 |
| 17.1 | URUMQI NO. 1 W-BRANCH | CN0002  | 2006 | FXD | 4400     | 4484 | 0.031 |      |       | 251   |
|      |                       |         |      |     | 4350     | 4400 | 0.033 |      |       | 306   |
|      |                       |         |      |     | 4300     | 4350 | 0.044 |      |       | 324   |
|      |                       |         |      |     | 4250     | 4300 | 0.035 |      |       | 330   |
|      |                       |         |      |     | 4200     | 4250 | 0.032 |      |       | 339   |
|      |                       |         |      |     | 4150     | 4200 | 0.036 |      |       | 281   |
|      |                       |         |      |     | 4100     | 4150 | 0.052 |      |       | 94    |
|      |                       |         |      |     | 4050     | 4100 | 0.111 |      |       | -269  |
|      |                       |         |      |     | 4000     | 4050 | 0.087 |      |       | -785  |
|      |                       |         |      |     | 3950     | 4000 | 0.066 |      |       | -1701 |
|      |                       |         |      |     | 3900     | 3950 | 0.039 |      |       | -2356 |
|      |                       |         |      |     | 3845     | 3900 | 0.025 |      |       | -2780 |
|      |                       |         |      |     | 3845     | 4484 | 0.591 |      |       | -506  |
|      |                       |         |      |     | 4400     | 4484 | 0.031 |      |       | 234   |
| 17.2 | URUMQI NO. 1 W-BRANCH | CN0002  | 2007 | FXD | 4350     | 4400 | 0.033 |      |       | 288   |
|      |                       |         |      |     | 4300     | 4350 | 0.044 |      |       | 324   |
|      |                       |         |      |     | 4250     | 4300 | 0.035 |      |       | 353   |
|      |                       |         |      |     | 4200     | 4250 | 0.032 |      |       | 372   |
|      |                       |         |      |     | 4150     | 4200 | 0.036 |      |       | 192   |
|      |                       |         |      |     | 4100     | 4150 | 0.052 |      |       | -78   |
|      |                       |         |      |     | 4050     | 4100 | 0.111 |      |       | -492  |
|      |                       |         |      |     | 4000     | 4050 | 0.087 |      |       | -814  |
|      |                       |         |      |     | 3950     | 4000 | 0.066 |      |       | -1522 |
|      |                       |         |      |     | 3900     | 3950 | 0.039 |      |       | -2184 |
|      |                       |         |      |     | 3845     | 3900 | 0.025 |      |       | -2835 |
|      |                       |         |      |     | 3845     | 4484 | 0.591 |      |       | -542  |
|      |                       |         |      |     | 4450     | 4484 | 0.008 | 201  | -165  | 36    |
|      |                       |         |      |     | 4400     | 4450 | 0.021 | 224  | -166  | 58    |
| 17.3 | URUMQI NO. 1 W-BRANCH | CN0002  | 2008 | FXD | 4350     | 4400 | 0.033 | 251  | -169  | 82    |
|      |                       |         |      |     | 4300     | 4350 | 0.043 | 280  | -185  | 95    |



| NR   | GLACIER NAME          | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                       |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                       |         |      |     | 4250     | 4300 | 0.035 | 312  | -199  | 113   |
|      |                       |         |      |     | 4200     | 4250 | 0.031 | 344  | -231  | 113   |
|      |                       |         |      |     | 4150     | 4200 | 0.035 | 347  | -399  | -52   |
|      |                       |         |      |     | 4100     | 4150 | 0.052 | 338  | -657  | -319  |
|      |                       |         |      |     | 4050     | 4100 | 0.113 | 298  | -992  | -694  |
|      |                       |         |      |     | 4000     | 4050 | 0.09  | 266  | -1292 | -1026 |
|      |                       |         |      |     | 3950     | 4000 | 0.067 | 0    | -1583 | -1583 |
|      |                       |         |      |     | 3900     | 3950 | 0.039 | -269 | -1913 | -2182 |
|      |                       |         |      |     | 3845     | 3900 | 0.025 | -562 | -2170 | -2732 |
|      |                       |         |      |     | 3845     | 4484 | 0.591 | 190  | -909  | -719  |
| 17.4 | URUMQI NO. 1 W-BRANCH | CN0002  | 2009 | FXD | 4400     | 4484 | 0.008 | 193  | 318   | 511   |
|      |                       |         |      |     | 4350     | 4400 | 0.025 | 214  | 346   | 560   |
|      |                       |         |      |     | 4300     | 4350 | 0.047 | 240  | 381   | 621   |
|      |                       |         |      |     | 4250     | 4300 | 0.04  | 266  | 415   | 681   |
|      |                       |         |      |     | 4200     | 4250 | 0.032 | 295  | 449   | 744   |
|      |                       |         |      |     | 4150     | 4200 | 0.042 | 301  | 433   | 734   |
|      |                       |         |      |     | 4100     | 4150 | 0.073 | 294  | 269   | 563   |
|      |                       |         |      |     | 4050     | 4100 | 0.109 | 267  | 271   | 538   |
|      |                       |         |      |     | 4000     | 4050 | 0.098 | 250  | 72    | 322   |
|      |                       |         |      |     | 3950     | 4000 | 0.054 | 180  | -729  | -549  |
|      |                       |         |      |     | 3900     | 3950 | 0.036 | 11   | -1240 | -1229 |
|      |                       |         |      |     | 3845     | 3900 | 0.013 | -223 | -1776 | -1999 |
|      |                       |         |      |     | 3845     | 4484 | 0.577 | 236  | 53    | 289   |
| 17.5 | URUMQI NO. 1 W-BRANCH | CN0002  | 2010 | FXD | 4400     | 4484 | 0.008 | 115  | -501  | -386  |
|      |                       |         |      |     | 4350     | 4400 | 0.025 | 127  | -517  | -390  |
|      |                       |         |      |     | 4300     | 4350 | 0.047 | 142  | -542  | -400  |
|      |                       |         |      |     | 4250     | 4300 | 0.04  | 157  | -569  | -412  |
|      |                       |         |      |     | 4200     | 4250 | 0.032 | 174  | -611  | -437  |
|      |                       |         |      |     | 4150     | 4200 | 0.042 | 178  | -768  | -590  |
|      |                       |         |      |     | 4100     | 4150 | 0.073 | 173  | -992  | -819  |
|      |                       |         |      |     | 4050     | 4100 | 0.109 | 151  | -1305 | -1154 |
|      |                       |         |      |     | 4000     | 4050 | 0.098 | 104  | -1540 | -1436 |
|      |                       |         |      |     | 3950     | 4000 | 0.054 | -41  | -1902 | -1943 |
|      |                       |         |      |     | 3900     | 3950 | 0.036 | -197 | -2272 | -2469 |
|      |                       |         |      |     | 3845     | 3900 | 0.013 | -352 | -2636 | -2988 |
|      |                       |         |      |     | 3845     | 4484 | 0.577 | 97   | -1213 | -1116 |
|      | <u>C.I.S.</u>         |         |      |     |          |      |       |      |       |       |
| 18.1 | DJANKUAT              | SU3010  | 2006 | COM | 3600     | 3760 | 0.047 | 1530 | -1270 | 260   |
|      |                       |         |      |     | 3500     | 3600 | 0.359 | 2370 | -1660 | 710   |
|      |                       |         |      |     | 3400     | 3500 | 0.346 | 2030 | -1990 | 40    |
|      |                       |         |      |     | 3300     | 3400 | 0.355 | 2340 | -2270 | 70    |
|      |                       |         |      |     | 3200     | 3300 | 0.439 | 2870 | -2930 | -60   |
|      |                       |         |      |     | 3100     | 3200 | 0.359 | 2620 | -3300 | -680  |
|      |                       |         |      |     | 3000     | 3100 | 0.282 | 2450 | -4050 | -1600 |
|      |                       |         |      |     | 2900     | 3000 | 0.277 | 1880 | -4970 | -3090 |
|      |                       |         |      |     | 2800     | 2900 | 0.187 | 1550 | -5130 | -3580 |
|      |                       |         |      |     | 2700     | 2800 | 0.086 | 1260 | -4620 | -3360 |
|      |                       |         |      |     | 2700     | 3760 | 2.737 | 2290 | -3090 | -800  |
| 18.2 | DJANKUAT              | SU3010  | 2007 | COM | 3600     | 3780 | 0.077 | 1410 | 1310  | 100   |
|      |                       |         |      |     | 3500     | 3600 | 0.342 | 2180 | 1830  | 350   |
|      |                       |         |      |     | 3400     | 3500 | 0.331 | 1980 | 2310  | -330  |
|      |                       |         |      |     | 3300     | 3400 | 0.351 | 1920 | 2940  | -1020 |
|      |                       |         |      |     | 3200     | 3300 | 0.434 | 2240 | 3940  | -1700 |
|      |                       |         |      |     | 3100     | 3200 | 0.355 | 1920 | 4280  | -2360 |
|      |                       |         |      |     | 3000     | 3100 | 0.288 | 2000 | 5010  | -3010 |
|      |                       |         |      |     | 2900     | 3000 | 0.261 | 1690 | 6430  | -4740 |
|      |                       |         |      |     | 2800     | 2900 | 0.159 | 1570 | 6850  | -5280 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 19.1 | GARABASHI    | SU3031  | 2008 | STR | 2710     | 2800 | 0.09  | 1610 | 8100  | -6490 |
|      |              |         |      |     | 2710     | 3780 | 2.688 | 1950 | 3960  | -2010 |
|      |              |         |      |     | 4600     | 5000 | 0     | 280  | -20   | 260   |
|      |              |         |      |     | 4500     | 4600 | 0     | 380  | -260  | 120   |
|      |              |         |      |     | 4400     | 4500 | 0     | 430  | -340  | 90    |
|      |              |         |      |     | 4300     | 4400 | 0     | 470  | -410  | 60    |
|      |              |         |      |     | 4200     | 4300 | 0     | 630  | -450  | 180   |
|      |              |         |      |     | 4100     | 4200 | 0     | 950  | -510  | 440   |
|      |              |         |      |     | 4000     | 4100 | 0     | 1870 | -620  | 1250  |
|      |              |         |      |     | 3900     | 4000 | 0     | 2020 | -1150 | 870   |
|      |              |         |      |     | 3800     | 3900 | 0     | 1450 | -2110 | -660  |
|      |              |         |      |     | 3700     | 3800 | 0     | 1090 | -2640 | -1550 |
|      |              |         |      |     | 3600     | 3700 | 0     | 1050 | -3200 | -2150 |
|      |              |         |      |     | 3500     | 3600 | 0     | 1290 | -3730 | -2440 |
|      |              |         |      |     | 3400     | 3500 | 0     | 1250 | -4350 | -3100 |
| 19.2 | GARABASHI    | SU3031  | 2009 | STR | 3300     | 3400 | 0     | 1110 | -4890 | -3780 |
|      |              |         |      |     | 3300     | 5000 | 4.422 | 1230 | -1890 | -660  |
|      |              |         |      |     | 4600     | 5000 | 0     | 150  | -10   | 140   |
|      |              |         |      |     | 4500     | 4600 | 0     | 240  | -120  | 120   |
|      |              |         |      |     | 4400     | 4500 | 0     | 300  | -190  | 110   |
|      |              |         |      |     | 4300     | 4400 | 0     | 320  | -240  | 80    |
|      |              |         |      |     | 4200     | 4300 | 0     | 450  | -290  | 160   |
|      |              |         |      |     | 4100     | 4200 | 0     | 660  | -330  | 330   |
|      |              |         |      |     | 4000     | 4100 | 0     | 1100 | -310  | 790   |
|      |              |         |      |     | 3900     | 4000 | 0     | 1420 | -830  | 590   |
|      |              |         |      |     | 3800     | 3900 | 0     | 1090 | -1670 | -580  |
|      |              |         |      |     | 3700     | 3800 | 0     | 1020 | -2300 | -1280 |
|      |              |         |      |     | 3600     | 3700 | 0     | 1060 | -2920 | -1860 |
|      |              |         |      |     | 3500     | 3600 | 0     | 1260 | -3360 | -2100 |
|      |              |         |      |     | 3400     | 3500 | 0     | 1140 | -3880 | -2740 |
| 19.3 | GARABASHI    | SU3031  | 2008 | STR | 3300     | 3400 | 0     | 810  | -4290 | -3480 |
|      |              |         |      |     | 3300     | 5000 | 4.422 | 940  | -1570 | -630  |
|      |              |         |      |     | 4600     | 5000 | 0     | 280  | 0     | 280   |
|      |              |         |      |     | 4500     | 4600 | 0     | 380  | -120  | 260   |
|      |              |         |      |     | 4400     | 4500 | 0     | 420  | -180  | 240   |
|      |              |         |      |     | 4300     | 4400 | 0     | 500  | -240  | 260   |
|      |              |         |      |     | 4200     | 4300 | 0     | 680  | -300  | 380   |
|      |              |         |      |     | 4100     | 4200 | 0     | 920  | -350  | 570   |
|      |              |         |      |     | 4000     | 4100 | 0     | 1530 | -320  | 1210  |
|      |              |         |      |     | 3900     | 4000 | 0     | 1920 | -800  | 1120  |
|      |              |         |      |     | 3800     | 3900 | 0     | 1410 | -1670 | -260  |
|      |              |         |      |     | 3700     | 3800 | 0     | 1070 | -2300 | -1230 |
|      |              |         |      |     | 3600     | 3700 | 0     | 1060 | -3000 | -1940 |
|      |              |         |      |     | 3500     | 3600 | 0     | 1250 | -3440 | -2190 |
|      |              |         |      |     | 3400     | 3500 | 0     | 1210 | -3980 | -2770 |
| 19.4 | GARABASHI    | SU3031  | 2009 | STR | 3300     | 3400 | 0     | 1060 | -4350 | -3290 |
|      |              |         |      |     | 3300     | 5000 | 4.422 | 1170 | -1590 | -420  |
|      |              |         |      |     | 4600     | 5000 | 0     | 140  | 0     | 140   |
|      |              |         |      |     | 4500     | 4600 | 0     | 360  | -80   | 280   |
|      |              |         |      |     | 4400     | 4500 | 0     | 450  | -140  | 310   |
|      |              |         |      |     | 4300     | 4400 | 0     | 490  | -210  | 280   |
|      |              |         |      |     | 4200     | 4300 | 0     | 600  | -240  | 360   |
|      |              |         |      |     | 4100     | 4200 | 0     | 750  | -290  | 460   |
|      |              |         |      |     | 4000     | 4100 | 0     | 1140 | -250  | 890   |
|      |              |         |      |     | 3900     | 4000 | 0     | 1360 | -610  | 750   |
|      |              |         |      |     | 3800     | 3900 | 0     | 1020 | -1280 | -260  |
|      |              |         |      |     | 3700     | 3800 | 0     | 860  | -1850 | -990  |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 19.5 | GARABASHI    | SU3031  | 2010 | STR | 3600     | 3700 | 0     | 900  | -2380 | -1480 |
|      |              |         |      |     | 3500     | 3600 | 0     | 1070 | -2850 | -1780 |
|      |              |         |      |     | 3400     | 3500 | 0     | 1030 | -3270 | -2240 |
|      |              |         |      |     | 3300     | 3400 | 0     | 730  | -3530 | -2800 |
|      |              |         |      |     | 3300     | 5000 | 4.422 | 900  | -1270 | -370  |
|      |              |         |      |     | 4600     | 5000 | 0     | 230  | 0     | 230   |
|      |              |         |      |     | 4500     | 4600 | 0     | 290  | -170  | 120   |
|      |              |         |      |     | 4400     | 4500 | 0     | 300  | -310  | -10   |
|      |              |         |      |     | 4300     | 4400 | 0     | 300  | -430  | -130  |
|      |              |         |      |     | 4200     | 4300 | 0     | 630  | -500  | 130   |
|      |              |         |      |     | 4100     | 4200 | 0     | 1220 | -610  | 610   |
|      |              |         |      |     | 4000     | 4100 | 0     | 1960 | -880  | 1080  |
|      |              |         |      |     | 3900     | 4000 | 0     | 1770 | -1550 | 220   |
|      |              |         |      |     | 3800     | 3900 | 0     | 1340 | -2880 | -1540 |
| 20.1 | MALIY AKTRU  | SU7100  | 2006 | STR | 3700     | 3800 | 0     | 1050 | -3500 | -2450 |
|      |              |         |      |     | 3600     | 3700 | 0     | 950  | -4100 | -3150 |
|      |              |         |      |     | 3500     | 3600 | 0     | 1150 | -4660 | -3510 |
|      |              |         |      |     | 3400     | 3500 | 0     | 1200 | -5260 | -4060 |
|      |              |         |      |     | 3300     | 3400 | 0     | 1070 | -5720 | -4650 |
|      |              |         |      |     | 3300     | 5000 | 4.422 | 1160 | -2400 | -1240 |
|      |              |         |      |     | 3600     | 3700 | 0     |      |       | 460   |
|      |              |         |      |     | 3500     | 3600 | 0     |      |       | 630   |
|      |              |         |      |     | 3400     | 3500 | 0     |      |       | 760   |
|      |              |         |      |     | 3300     | 3400 | 0     |      |       | 680   |
|      |              |         |      |     | 3200     | 3300 | 0     |      |       | 70    |
|      |              |         |      |     | 3100     | 3200 | 0     |      |       | -490  |
|      |              |         |      |     | 3000     | 3100 | 0     |      |       | -1010 |
|      |              |         |      |     | 2900     | 3000 | 0     |      |       | -1410 |
| 20.2 | MALIY AKTRU  | SU7100  | 2007 | STR | 2800     | 2900 | 0     |      |       | -1990 |
|      |              |         |      |     | 2700     | 2800 | 0     |      |       | -2260 |
|      |              |         |      |     | 2600     | 2700 | 0     |      |       | -2690 |
|      |              |         |      |     | 2500     | 2600 | 0     |      |       | -3020 |
|      |              |         |      |     | 2400     | 2500 | 0     |      |       | -3510 |
|      |              |         |      |     | 2300     | 2400 | 0     |      |       | -3970 |
|      |              |         |      |     | 2200     | 2300 | 0     |      |       | -4610 |
|      |              |         |      |     | 2200     | 3700 | 0     |      |       | -140  |
|      |              |         |      |     | 3600     | 3700 | 0     |      |       | 350   |
|      |              |         |      |     | 3500     | 3600 | 0     |      |       | 440   |
|      |              |         |      |     | 3400     | 3500 | 0     |      |       | 600   |
|      |              |         |      |     | 3300     | 3400 | 0     |      |       | 630   |
|      |              |         |      |     | 3200     | 3300 | 0     |      |       | -250  |
|      |              |         |      |     | 3100     | 3200 | 0     |      |       | -770  |
| 20.3 | MALIY AKTRU  | SU7100  | 2008 | STR | 3000     | 3100 | 0     |      |       | -1250 |
|      |              |         |      |     | 2900     | 3000 | 0     |      |       | -1630 |
|      |              |         |      |     | 2800     | 2900 | 0     |      |       | -2170 |
|      |              |         |      |     | 2700     | 2800 | 0     |      |       | -2540 |
|      |              |         |      |     | 2600     | 2700 | 0     |      |       | -2850 |
|      |              |         |      |     | 2500     | 2600 | 0     |      |       | -3190 |
|      |              |         |      |     | 2400     | 2500 | 0     |      |       | -3710 |
|      |              |         |      |     | 2300     | 2400 | 0     |      |       | -4050 |
|      |              |         |      |     | 2200     | 2300 | 0     |      |       | -4590 |
|      |              |         |      |     | 2200     | 3700 | 0     |      |       | -340  |
|      |              |         |      |     | 3600     | 3700 | 0     |      |       | 240   |
|      |              |         |      |     | 3500     | 3600 | 0     |      |       | 350   |
|      |              |         |      |     | 3400     | 3500 | 0     |      |       | 510   |
|      |              |         |      |     | 3300     | 3400 | 0     |      |       | -250  |
|      |              |         |      |     | 3200     | 3300 | 0     |      |       | -950  |

| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                 |         |      |     | FROM     | TO   |       |      |       |       |
|      |                 |         |      |     |          |      | KM²   | MM   | MM    | MM    |
|      |                 |         |      |     | 3100     | 3200 | 0     |      |       | -1490 |
|      |                 |         |      |     | 3000     | 3100 | 0     |      |       | -1750 |
|      |                 |         |      |     | 2900     | 3000 | 0     |      |       | -2290 |
|      |                 |         |      |     | 2800     | 2900 | 0     |      |       | -2750 |
|      |                 |         |      |     | 2700     | 2800 | 0     |      |       | -3020 |
|      |                 |         |      |     | 2600     | 2700 | 0     |      |       | -3480 |
|      |                 |         |      |     | 2500     | 2600 | 0     |      |       | -3790 |
|      |                 |         |      |     | 2400     | 2500 | 0     |      |       | -4100 |
|      |                 |         |      |     | 2300     | 2400 | 0     |      |       | -4450 |
|      |                 |         |      |     | 2200     | 2300 | 0     |      |       | -5050 |
|      |                 |         |      |     | 2200     | 3700 | 0     |      |       | -870  |
| 20.4 | MALIY AKTRU     | SU7100  | 2009 | STR | 3600     | 3700 | 0     |      |       | 850   |
|      |                 |         |      |     | 3500     | 3600 | 0     |      |       | 1210  |
|      |                 |         |      |     | 3400     | 3500 | 0     |      |       | 1320  |
|      |                 |         |      |     | 3300     | 3400 | 0     |      |       | 1260  |
|      |                 |         |      |     | 3200     | 3300 | 0     |      |       | 850   |
|      |                 |         |      |     | 3100     | 3200 | 0     |      |       | 160   |
|      |                 |         |      |     | 3000     | 3100 | 0     |      |       | 50    |
|      |                 |         |      |     | 2900     | 3000 | 0     |      |       | -230  |
|      |                 |         |      |     | 2800     | 2900 | 0     |      |       | -870  |
|      |                 |         |      |     | 2700     | 2800 | 0     |      |       | -130  |
|      |                 |         |      |     | 2600     | 2700 | 0     |      |       | -1480 |
|      |                 |         |      |     | 2500     | 2600 | 0     |      |       | -2190 |
|      |                 |         |      |     | 2400     | 2500 | 0     |      |       | -2720 |
|      |                 |         |      |     | 2300     | 2400 | 0     |      |       | -3150 |
|      |                 |         |      |     | 2200     | 2300 | 0     |      |       | -3600 |
|      |                 |         |      |     | 2200     | 3700 | 0     | 1210 | -620  | 590   |
| 21.1 | TS.TUYUKSUYSKIY | SU5075  | 2006 | STR | 4100     | 4219 | 0.188 | 301  | 141   | 160   |
|      |                 |         |      |     | 4000     | 4100 | 0.317 | 557  | 367   | 190   |
|      |                 |         |      |     | 3900     | 4000 | 0.24  | 700  | -840  | -140  |
|      |                 |         |      |     | 3800     | 3900 | 0.348 | 836  | -1486 | -650  |
|      |                 |         |      |     | 3750     | 3800 | 0.411 | 772  | -2083 | -1311 |
|      |                 |         |      |     | 3700     | 3750 | 0.398 | 748  | -2090 | -1342 |
|      |                 |         |      |     | 3650     | 3700 | 0.218 | 688  | -2336 | -1648 |
|      |                 |         |      |     | 3600     | 3650 | 0.108 | 716  | -2309 | -1593 |
|      |                 |         |      |     | 3550     | 3600 | 0.118 | 667  | -2487 | -1820 |
|      |                 |         |      |     | 3500     | 3550 | 0.133 | 599  | -2950 | -2351 |
|      |                 |         |      |     | 3480     | 3500 | 0.053 | 657  | -3219 | -2562 |
|      |                 |         |      |     | 3480     | 4219 | 2.513 | 687  | -1656 | -969  |
| 21.2 | TS.TUYUKSUYSKIY | SU5075  | 2007 | STR | 4100     | 4200 | 0.17  | 228  | 169   | 397   |
|      |                 |         |      |     | 4000     | 4100 | 0.312 | 422  | 66    | 488   |
|      |                 |         |      |     | 3900     | 4000 | 0.25  | 531  | -113  | 418   |
|      |                 |         |      |     | 3800     | 3900 | 0.343 | 634  | -884  | -250  |
|      |                 |         |      |     | 3750     | 3800 | 0.411 | 571  | -1918 | -1347 |
|      |                 |         |      |     | 3700     | 3750 | 0.398 | 589  | -2207 | -1618 |
|      |                 |         |      |     | 3650     | 3700 | 0.218 | 552  | -2189 | -2637 |
|      |                 |         |      |     | 3600     | 3650 | 0.108 | 624  | -2279 | -1655 |
|      |                 |         |      |     | 3550     | 3600 | 0.118 | 627  | -2801 | -2174 |
|      |                 |         |      |     | 3500     | 3550 | 0.133 | 552  | -3249 | -2697 |
|      |                 |         |      |     | 3480     | 3500 | 0.011 | 570  | -3629 | -3059 |
|      |                 |         |      |     | 3480     | 4200 | 2.472 | 538  | -1453 | -915  |
| 21.3 | TS.TUYUKSUYSKIY | SU5075  | 2008 | STR | 4100     | 4200 | 0.17  | 181  | 8     | 189   |
|      |                 |         |      |     | 4000     | 4100 | 0.313 | 335  | -180  | 155   |
|      |                 |         |      |     | 3900     | 4000 | 0.25  | 421  | -641  | -220  |
|      |                 |         |      |     | 3800     | 3900 | 0.343 | 503  | -1453 | -950  |
|      |                 |         |      |     | 3750     | 3800 | 0.411 | 464  | -2188 | -1724 |
|      |                 |         |      |     | 3700     | 3750 | 0.398 | 442  | -2521 | -2079 |

| NR   | GLACIER NAME                   | PSFG NR | YEAR | SYS | ALTITUDE       |                 | AREA   | BW   | BS    | BA    |      |       |  |  |     |
|------|--------------------------------|---------|------|-----|----------------|-----------------|--------|------|-------|-------|------|-------|--|--|-----|
|      |                                |         |      |     | FROM           | TO              | KM²    | MM   | MM    | MM    |      |       |  |  |     |
| 21.4 | TS.TUYUKSUYSKIY                | SU5075  | 2010 |     | 3650           | 3700            | 0.218  | 406  | -2643 | -2237 |      |       |  |  |     |
|      |                                |         |      |     | 3600           | 3650            | 0.108  | 412  | -2762 | -2350 |      |       |  |  |     |
|      |                                |         |      |     | 3550           | 3600            | 0.118  | 433  | -3291 | -2858 |      |       |  |  |     |
|      |                                |         |      |     | 3500           | 3550            | 0.123  | 356  | -3712 | -3356 |      |       |  |  |     |
|      |                                |         |      |     | 3500           | 4200            | 451    | 411  | -1768 | -1357 |      |       |  |  |     |
|      |                                |         |      |     | 4100           | 4200            | 0.172  | 381  | 537   | 919   |      |       |  |  |     |
|      |                                |         |      |     | 4000           | 4100            | 0.331  | 706  | 296   | 1002  |      |       |  |  |     |
|      |                                |         |      |     | 3900           | 4000            | 0.251  | 887  | 416   | 416   |      |       |  |  |     |
|      |                                |         |      |     | 3800           | 3900            | 0.333  | 1058 | -252  | 806   |      |       |  |  |     |
|      |                                |         |      |     | 3750           | 3800            | 0.33   | 959  | -1208 | -249  |      |       |  |  |     |
|      |                                |         |      |     | 3700           | 3750            | 0.402  | 948  | -1514 | -582  |      |       |  |  |     |
| 22.1 | <u>COLOMBIA</u><br>LA CONEJERA | CO0033  | 2009 | FXD | 3650           | 3700            | 0.237  | 932  | -1732 | -800  |      |       |  |  |     |
|      |                                |         |      |     | 3600           | 3650            | 0.112  | 1071 | -1869 | -798  |      |       |  |  |     |
|      |                                |         |      |     | 3550           | 3600            | 0.142  | 998  | -2178 | -1180 |      |       |  |  |     |
|      |                                |         |      |     | 3500           | 3550            | 0.134  | 858  | -2688 | -1830 |      |       |  |  |     |
|      |                                |         |      |     | 3500           | 4200            | 2.446  | 887  | -855  | 32    |      |       |  |  |     |
|      |                                |         |      |     | 4817           | 4958            | 0.013  |      |       | 281   |      |       |  |  |     |
|      |                                |         |      |     | 4799           | 4817            | 0.076  |      |       | -653  |      |       |  |  |     |
|      |                                |         |      |     | 4754           | 4799            | 0.037  |      |       | -405  |      |       |  |  |     |
|      |                                |         |      |     | 4717           | 4754            | 0.059  |      |       | -931  |      |       |  |  |     |
|      |                                |         |      |     | 4710           | 4717            | 0.037  |      |       | -775  |      |       |  |  |     |
|      |                                |         |      |     | 4710           | 4958            | 0.221  |      |       | -653  |      |       |  |  |     |
| 22.2 | LA CONEJERA                    | CO0033  | 2010 | FXD | 4817           | 4958            | 0.013  |      |       | -81   |      |       |  |  |     |
|      |                                |         |      |     | 4799           | 4817            | 0.076  |      |       | -888  |      |       |  |  |     |
|      |                                |         |      |     | 4754           | 4799            | 0.037  |      |       | -354  |      |       |  |  |     |
|      |                                |         |      |     | 4721           | 4754            | 0.059  |      |       | -967  |      |       |  |  |     |
|      |                                |         |      |     | 4715           | 4721            | 0.036  |      |       | -785  |      |       |  |  |     |
|      |                                |         |      |     | 4715           | 4958            | 0.22   |      |       | -757  |      |       |  |  |     |
|      |                                |         |      |     | <u>ECUADOR</u> |                 |        |      |       |       |      |       |  |  |     |
|      |                                |         |      |     | 23.1           | ANTIZANA15ALPHA | EC0001 | 2006 | FXD   | 5600  | 5760 | 0.038 |  |  | 127 |
|      |                                |         |      |     |                |                 |        |      |       | 5500  | 5600 | 0.024 |  |  | 79  |
|      |                                |         |      |     |                |                 |        |      |       | 5400  | 5500 | 0.029 |  |  | 90  |
|      |                                |         |      |     |                |                 |        |      |       | 5300  | 5400 | 0.034 |  |  | 98  |
| 5200 | 5600                           | 0.034   |      |     |                |                 |        |      |       | 56    |      |       |  |  |     |
| 5100 | 5200                           | 0.06    |      |     |                |                 |        |      |       | -268  |      |       |  |  |     |
| 5000 | 5100                           | 0.02    |      |     |                |                 |        |      |       | -125  |      |       |  |  |     |
| 4960 | 5000                           | 0.02    |      |     |                |                 |        |      |       | -165  |      |       |  |  |     |
| 4910 | 4960                           | 0.021   |      |     |                |                 |        |      |       | -191  |      |       |  |  |     |
| 4880 | 4910                           | 0.009   |      |     |                |                 |        |      |       | -116  |      |       |  |  |     |
| 4860 | 4880                           | 0.003   |      |     |                |                 |        |      |       | -37   |      |       |  |  |     |
| 4860 | 5760                           | 0.292   |      |     |                |                 |        |      |       | -203  |      |       |  |  |     |
| 23.2 | ANTIZANA15ALPHA                | EC0001  | 2007 | FXD | 5600           | 5760            | 0.038  |      |       | 118   |      |       |  |  |     |
|      |                                |         |      |     | 5500           | 5600            | 0.024  |      |       | 66    |      |       |  |  |     |
|      |                                |         |      |     | 5400           | 5500            | 0.029  |      |       | 76    |      |       |  |  |     |
|      |                                |         |      |     | 5300           | 5400            | 0.034  |      |       | 66    |      |       |  |  |     |
|      |                                |         |      |     | 5200           | 5600            | 0.034  |      |       | 35    |      |       |  |  |     |
|      |                                |         |      |     | 5100           | 5200            | 0.057  |      |       | -309  |      |       |  |  |     |
|      |                                |         |      |     | 5000           | 5100            | 0.019  |      |       | -136  |      |       |  |  |     |
|      |                                |         |      |     | 4960           | 5000            | 0.02   |      |       | -194  |      |       |  |  |     |
|      |                                |         |      |     | 4910           | 4960            | 0.021  |      |       | -250  |      |       |  |  |     |
|      |                                |         |      |     | 4880           | 4910            | 0.009  |      |       | -121  |      |       |  |  |     |
|      |                                |         |      |     | 4860           | 4880            | 0.001  |      |       | -9    |      |       |  |  |     |
|      |                                |         |      |     | 4860           | 5760            | 0.286  |      |       | -66   |      |       |  |  |     |

| NR               | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |                 | AREA   | BW   | BS    | BA    |
|------------------|-----------------|---------|------|-----|----------|-----------------|--------|------|-------|-------|
|                  |                 |         |      |     | FROM     | TO              |        |      |       |       |
| 23.3             | ANTIZANA15ALPHA | EC0001  | 2008 | FXD | 5600     | 5760            | 0.038  |      |       | 141   |
|                  |                 |         |      |     | 5500     | 5600            | 0.024  |      |       | 88    |
|                  |                 |         |      |     | 5400     | 5500            | 0.029  |      |       | 108   |
|                  |                 |         |      |     | 5300     | 5400            | 0.034  |      |       | 40    |
|                  |                 |         |      |     | 5200     | 5600            | 0.034  |      |       | 28    |
|                  |                 |         |      |     | 5100     | 5200            | 0.057  |      |       | 29    |
|                  |                 |         |      |     | 5000     | 5100            | 0.02   |      |       | 4     |
|                  |                 |         |      |     | 4960     | 5000            | 0.021  |      |       | -13   |
|                  |                 |         |      |     | 4910     | 4960            | 0.022  |      |       | -49   |
|                  |                 |         |      |     | 4880     | 4910            | 0.009  |      |       | -36   |
|                  |                 |         |      |     | 4860     | 4880            | 0      |      |       | -3    |
|                  |                 |         |      |     | 4860     | 5760            | 0      |      |       | 337   |
| 23.4             | ANTIZANA15ALPHA | EC0001  | 2009 | FXD | 5600     | 5760            | 0.038  |      |       | 106   |
|                  |                 |         |      |     | 5500     | 5600            | 0.024  |      |       | 66    |
|                  |                 |         |      |     | 5400     | 5500            | 0.029  |      |       | 82    |
|                  |                 |         |      |     | 5300     | 5400            | 0.034  |      |       | 89    |
|                  |                 |         |      |     | 5200     | 5300            | 0.034  |      |       | 59    |
|                  |                 |         |      |     | 5100     | 5200            | 0.057  |      |       | -291  |
|                  |                 |         |      |     | 5000     | 5100            | 0.02   |      |       | -155  |
|                  |                 |         |      |     | 4960     | 5000            | 0.021  |      |       | -281  |
|                  |                 |         |      |     | 4910     | 4960            | 0.022  |      |       | -302  |
|                  |                 |         |      |     | 4860     | 4910            | 0.013  |      |       | -201  |
|                  |                 |         |      |     | 4860     | 5760            | 0.292  |      |       | -828  |
|                  |                 |         |      |     | 23.5     | ANTIZANA15ALPHA | EC0001 | 2010 | FXD   | 5600  |
| 5500             | 5600            | 0.024   |      |     |          |                 |        |      |       | 115   |
| 5400             | 5500            | 0.029   |      |     |          |                 |        |      |       | 141   |
| 5300             | 5400            | 0.034   |      |     |          |                 |        |      |       | 89    |
| 5200             | 5300            | 0.034   |      |     |          |                 |        |      |       | 59    |
| 5100             | 5200            | 0.057   |      |     |          |                 |        |      |       | -291  |
| 5000             | 5100            | 0.021   |      |     |          |                 |        |      |       | -293  |
| 4960             | 5000            | 0.021   |      |     |          |                 |        |      |       | -311  |
| 4910             | 4960            | 0.022   |      |     |          |                 |        |      |       | -392  |
| 4860             | 4910            | 0.013   |      |     |          |                 |        |      |       | -240  |
| 4860             | 5760            | 0.293   |      |     |          |                 |        |      |       | -77   |
| <u>GREENLAND</u> |                 |         |      |     |          |                 |        |      |       |       |
| 24.1             | FREYA           | GL      | 2008 | COM | 1200     | 1300            | 0.075  | 374  | -172  | 202   |
|                  |                 |         |      |     | 1100     | 1200            | 0.258  | 330  | -165  | 165   |
|                  |                 |         |      |     | 1000     | 1100            | 0.377  | 604  | -565  | 38    |
|                  |                 |         |      |     | 900      | 1000            | 0.684  | 768  | -958  | -190  |
|                  |                 |         |      |     | 800      | 900             | 0.91   | 722  | -828  | -106  |
|                  |                 |         |      |     | 700      | 800             | 1.156  | 678  | -983  | -305  |
|                  |                 |         |      |     | 600      | 700             | 1.201  | 718  | -1557 | -839  |
|                  |                 |         |      |     | 500      | 600             | 0.544  | 683  | -1910 | -1227 |
|                  |                 |         |      |     | 400      | 500             | 0.329  | 747  | -2355 | -1608 |
|                  |                 |         |      |     | 300      | 400             | 0.067  | 847  | -3018 | -2170 |
|                  |                 |         |      |     | 300      | 1300            | 5.599  | 686  | -1196 | -510  |
|                  |                 |         |      |     | 24.2     | FREYA           | GL     | 2009 | COM   | 1200  |
| 1100             | 1200            | 0.258   |      |     |          |                 |        |      |       | 203   |
| 1000             | 1100            | 0.377   |      |     |          |                 |        |      |       | 198   |
| 900              | 1000            | 0.684   |      |     |          |                 |        |      |       | 111   |
| 800              | 900             | 0.91    |      |     |          |                 |        |      |       | 64    |
| 700              | 800             | 1.156   |      |     |          |                 |        |      |       | -359  |
| 600              | 700             | 1.201   |      |     |          |                 |        |      |       | -925  |
| 500              | 600             | 0.544   |      |     |          |                 |        |      |       | -1311 |
| 400              | 500             | 0.329   |      |     |          |                 |        |      |       | -1577 |
| 300              | 400             | 0.067   |      |     |          |                 |        |      |       | -1936 |
| 300              | 1300            | 5.599   |      |     |          |                 |        |      |       | -466  |

| NR   | GLACIER NAME  | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|---------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |               |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 24.3 | FREYA         | GL      | 2010 | COM | 1200     | 1300 | 0.075 |      |       | 208   |
|      |               |         |      |     | 1100     | 1200 | 0.258 |      |       | 212   |
|      |               |         |      |     | 1000     | 1100 | 0.377 |      |       | 172   |
|      |               |         |      |     | 900      | 1000 | 0.684 |      |       | -239  |
|      |               |         |      |     | 800      | 900  | 0.91  |      |       | -455  |
|      |               |         |      |     | 700      | 800  | 1.156 |      |       | -879  |
|      |               |         |      |     | 600      | 700  | 1.201 |      |       | -1222 |
|      |               |         |      |     | 500      | 600  | 0.544 |      |       | -1548 |
|      |               |         |      |     | 400      | 500  | 0.329 |      |       | -1640 |
|      |               |         |      |     | 300      | 400  | 0.067 |      |       | -2138 |
|      |               |         |      |     | 300      | 1300 | 5.599 |      |       | -795  |
| 25.1 | MITTIVAKKAT   | GL0019  | 2008 |     | 800      | 899  | 0.771 | 1500 | -600  | 900   |
|      |               |         |      |     | 700      | 800  | 2.647 | 1500 | -900  | 600   |
|      |               |         |      |     | 600      | 700  | 3.994 | 1400 | -1150 | 250   |
|      |               |         |      |     | 500      | 600  | 2.702 | 1200 | -1450 | -250  |
|      |               |         |      |     | 400      | 500  | 3.16  | 900  | -1800 | -900  |
|      |               |         |      |     | 300      | 400  | 2.351 | 850  | -2500 | -1650 |
|      |               |         |      |     | 200      | 300  | 1.439 | 750  | -3250 | -2500 |
|      |               |         |      |     | 130      | 200  | 0.536 | 900  | -4000 | -3100 |
|      |               |         |      |     | 130      | 899  | 17.6  | 1160 | -1690 | -520  |
| 25.2 | MITTIVAKKAT   | GL0019  | 2009 |     | 800      | 899  | 0.771 |      |       | 1000  |
|      |               |         |      |     | 700      | 800  | 2.647 |      |       | 370   |
|      |               |         |      |     | 600      | 700  | 3.994 |      |       | -270  |
|      |               |         |      |     | 500      | 600  | 2.702 |      |       | -900  |
|      |               |         |      |     | 400      | 500  | 3.16  |      |       | -1550 |
|      |               |         |      |     | 300      | 400  | 2.351 |      |       | -2200 |
|      |               |         |      |     | 200      | 300  | 1.439 |      |       | -2850 |
|      |               |         |      |     | 130      | 200  | 0.536 |      |       | -3300 |
|      |               |         |      |     | 130      | 899  | 17.6  |      |       | -1010 |
| 25.3 | MITTIVAKKAT   | GL0019  | 2010 |     | 800      | 899  | 0.771 |      |       | -350  |
|      |               |         |      |     | 700      | 800  | 2.647 |      |       | -900  |
|      |               |         |      |     | 600      | 700  | 3.994 |      |       | -1500 |
|      |               |         |      |     | 500      | 600  | 2.702 |      |       | -2100 |
|      |               |         |      |     | 400      | 500  | 3.16  |      |       | -2650 |
|      |               |         |      |     | 300      | 400  | 2.351 |      |       | -3200 |
|      |               |         |      |     | 200      | 300  | 1.439 |      |       | -3800 |
|      |               |         |      |     | 130      | 200  | 0.536 |      |       | -4200 |
|      |               |         |      |     | 130      | 899  | 17.6  |      |       | -2160 |
| 26.1 | CHHOTA SHIGRI | IN      | 2006 |     | 5400     | 6250 | 1.425 |      |       | 800   |
|      |               |         |      |     | 5250     | 5400 | 1.788 |      |       | 400   |
|      |               |         |      |     | 5200     | 5250 | 0.953 |      |       | -100  |
|      |               |         |      |     | 5150     | 5200 | 1.123 |      |       | -100  |
|      |               |         |      |     | 5100     | 5150 | 1.047 |      |       | -1059 |
|      |               |         |      |     | 5050     | 5100 | 1.163 |      |       | -795  |
|      |               |         |      |     | 5000     | 5050 | 1.237 |      |       | -1641 |
|      |               |         |      |     | 4950     | 5000 | 1.219 |      |       | -1625 |
|      |               |         |      |     | 4900     | 4950 | 1.008 |      |       | -1434 |
|      |               |         |      |     | 4850     | 4900 | 0.613 |      |       | -2296 |
|      |               |         |      |     | 4800     | 4850 | 0.65  |      |       | -2489 |
|      |               |         |      |     | 4750     | 4800 | 0.93  |      |       | -2894 |
|      |               |         |      |     | 4700     | 4750 | 0.501 |      |       | -3704 |
|      |               |         |      |     | 4650     | 4700 | 0.495 |      |       | -4010 |
|      |               |         |      |     | 4600     | 4650 | 0.306 |      |       | -4120 |
|      |               |         |      |     | 4550     | 4600 | 0.309 |      |       | -4351 |
|      |               |         |      |     | 4500     | 4550 | 0.188 |      |       | -4351 |
|      |               |         |      |     | 4450     | 4500 | 0.248 |      |       | -4452 |

INDIA

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |              |         |      |     | 4400     | 4450 | 0.155 |      |       | -4831 |
|      |              |         |      |     | 4350     | 4400 | 0.116 |      |       | -5323 |
|      |              |         |      |     | 4300     | 4350 | 0.094 |      |       | -3578 |
|      |              |         |      |     | 4050     | 4300 | 0.153 |      |       | -3843 |
|      |              |         |      |     | 4050     | 6250 | 0     |      |       | -1410 |
|      | <u>ITALY</u> |         |      |     |          |      |       |      |       |       |
| 27.1 | CARESER      | IT0701  | 2006 | FXD | 3250     | 3300 | 0.018 | 1117 | -2449 | -1332 |
|      |              |         |      |     | 3200     | 3250 | 0.04  | 788  | -2547 | -1759 |
|      |              |         |      |     | 3150     | 3200 | 0.148 | 901  | -2638 | -1737 |
|      |              |         |      |     | 3100     | 3150 | 0.372 | 862  | -2673 | -1811 |
|      |              |         |      |     | 3050     | 3100 | 0.851 | 887  | -2690 | -1803 |
|      |              |         |      |     | 3000     | 3050 | 0.412 | 821  | -3005 | -2184 |
|      |              |         |      |     | 2950     | 3000 | 0.35  | 800  | -3343 | -2543 |
|      |              |         |      |     | 2900     | 2950 | 0.135 | 679  | -3801 | -3122 |
|      |              |         |      |     | 2850     | 2900 | 0.074 | 641  | -4062 | -3421 |
|      |              |         |      |     | 2850     | 3300 | 2.399 | 841  | -2934 | -2093 |
| 27.2 | CARESER      | IT0701  | 2007 | FXD | 3250     | 3300 | 0.018 | 646  | -3052 | -2405 |
|      |              |         |      |     | 3200     | 3250 | 0.04  | 431  | -2933 | -2502 |
|      |              |         |      |     | 3150     | 3200 | 0.148 | 326  | -2790 | -2464 |
|      |              |         |      |     | 3100     | 3150 | 0.372 | 424  | -2670 | -2246 |
|      |              |         |      |     | 3050     | 3100 | 0.851 | 442  | -2827 | -2384 |
|      |              |         |      |     | 3000     | 3050 | 0.412 | 335  | -3270 | -2935 |
|      |              |         |      |     | 2950     | 3000 | 0.35  | 327  | -3656 | -3329 |
|      |              |         |      |     | 2900     | 2950 | 0.135 | 277  | -4176 | -3899 |
|      |              |         |      |     | 2850     | 2900 | 0.074 | 196  | -4453 | -4257 |
|      |              |         |      |     | 2850     | 3300 | 2.399 | 382  | -3127 | -2745 |
| 27.3 | CARESER      | IT0701  | 2008 | OTH | 3250     | 3300 | 0.017 | 1056 | -2261 | -1205 |
|      |              |         |      |     | 3200     | 3250 | 0.034 | 770  | -2316 | -1545 |
|      |              |         |      |     | 3150     | 3200 | 0.124 | 731  | -2348 | -1618 |
|      |              |         |      |     | 3100     | 3150 | 0.333 | 725  | -2299 | -1573 |
|      |              |         |      |     | 3050     | 3100 | 0.732 | 816  | -2324 | -1508 |
|      |              |         |      |     | 3000     | 3050 | 0.298 | 687  | -2853 | -2166 |
|      |              |         |      |     | 2950     | 3000 | 0.275 | 675  | -3137 | -2462 |
|      |              |         |      |     | 2900     | 2950 | 0.074 | 636  | -3560 | -2924 |
|      |              |         |      |     | 2850     | 2900 | 0.038 | 578  | -3823 | -3245 |
|      |              |         |      |     | 2850     | 3300 | 1.925 | 744  | -2596 | -1851 |
| 27.4 | CARESER      | IT0701  | 2009 | OTH | 3250     | 3300 | 0.017 | 2142 | -2087 | 55    |
|      |              |         |      |     | 3200     | 3250 | 0.034 | 1370 | -2166 | -795  |
|      |              |         |      |     | 3150     | 3200 | 0.124 | 1331 | -2241 | -910  |
|      |              |         |      |     | 3100     | 3150 | 0.333 | 1291 | -2357 | -1066 |
|      |              |         |      |     | 3050     | 3100 | 0.732 | 1387 | -2324 | -937  |
|      |              |         |      |     | 3000     | 3050 | 0.298 | 1352 | -2832 | -1480 |
|      |              |         |      |     | 2950     | 3000 | 0.275 | 1315 | -3109 | -1794 |
|      |              |         |      |     | 2900     | 2950 | 0.074 | 1259 | -3494 | -2235 |
|      |              |         |      |     | 2850     | 2900 | 0.038 | 1121 | -3735 | -2614 |
|      |              |         |      |     | 2850     | 3300 | 1.925 | 1347 | -2583 | -1236 |
| 27.5 | CARESER      | IT0701  | 2010 | FLO | 3250     | 3300 | 0.016 | 1351 | -1224 | 127   |
|      |              |         |      |     | 3200     | 3250 | 0.031 | 1182 | -1379 | -197  |
|      |              |         |      |     | 3150     | 3200 | 0.12  | 1067 | -1576 | -509  |
|      |              |         |      |     | 3100     | 3150 | 0.353 | 1001 | -1592 | -591  |
|      |              |         |      |     | 3050     | 3100 | 0.721 | 1114 | -1651 | -537  |
|      |              |         |      |     | 3000     | 3050 | 0.299 | 1053 | -2423 | -1370 |
|      |              |         |      |     | 2950     | 3000 | 0.274 | 987  | -2945 | -1957 |
|      |              |         |      |     | 2900     | 2950 | 0.059 | 826  | -3592 | -2766 |
|      |              |         |      |     | 2850     | 2900 | 0.014 | 864  | -3991 | -3127 |
|      |              |         |      |     | 2850     | 3300 | 1.886 | 1048 | -1986 | -939  |



| NR   | GLACIER NAME        | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|---------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                     |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 28.1 | CARESER CENTRALE    | IT      | 2010 | FLO | 3100     | 3150 | 0.006 | 1216 | -2075 | -859  |
|      |                     |         |      |     | 3050     | 3100 | 0.05  | 998  | -2314 | -1315 |
|      |                     |         |      |     | 3000     | 3050 | 0.074 | 975  | -2740 | -1765 |
|      |                     |         |      |     | 2950     | 3000 | 0.097 | 1002 | -3159 | -2158 |
|      |                     |         |      |     | 2900     | 2950 | 0.013 | 957  | -3622 | -2665 |
|      |                     |         |      |     | 2900     | 3150 | 0.241 | 996  | -2849 | -1853 |
| 29.1 | CARESER OCCIDENTALE | IT      | 2006 | FXD | 3250     | 3300 | 0.014 | 1240 | -2404 | -1164 |
|      |                     |         |      |     | 3200     | 3250 | 0.025 | 847  | -2504 | -1657 |
|      |                     |         |      |     | 3150     | 3200 | 0.085 | 918  | -2650 | -1731 |
|      |                     |         |      |     | 3100     | 3150 | 0.106 | 941  | -2966 | -2025 |
|      |                     |         |      |     | 3050     | 3100 | 0.041 | 836  | -3236 | -2400 |
|      |                     |         |      |     | 3000     | 3050 | 0     | 840  | -3372 | -2532 |
| 29.2 | CARESER OCCIDENTALE | IT      | 2007 | FXD | 3000     | 3300 | 0.271 | 925  | -2836 | -1911 |
|      |                     |         |      |     | 3250     | 3300 | 0.014 | 614  | -3118 | -2504 |
|      |                     |         |      |     | 3200     | 3250 | 0.025 | 395  | -3033 | -2638 |
|      |                     |         |      |     | 3150     | 3200 | 0.085 | 366  | -2856 | -2490 |
|      |                     |         |      |     | 3100     | 3150 | 0.106 | 411  | -2901 | -2490 |
|      |                     |         |      |     | 3050     | 3100 | 0.041 | 406  | -3250 | -2844 |
| 29.3 | CARESER OCCIDENTALE | IT      | 2008 | OTH | 3000     | 3050 | 0     | 269  | -3417 | -3147 |
|      |                     |         |      |     | 3000     | 3300 | 0.271 | 405  | -2964 | -2558 |
|      |                     |         |      |     | 3250     | 3300 | 0.013 | 1255 | -2272 | -1017 |
|      |                     |         |      |     | 3200     | 3250 | 0.019 | 906  | -2342 | -1436 |
|      |                     |         |      |     | 3150     | 3200 | 0.066 | 859  | -2309 | -1450 |
|      |                     |         |      |     | 3100     | 3150 | 0.099 | 754  | -2472 | -1718 |
| 29.4 | CARESER OCCIDENTALE | IT      | 2009 | OTH | 3050     | 3100 | 0.003 | 828  | -2674 | -1845 |
|      |                     |         |      |     | 3050     | 3300 | 0.27  | 986  | -2671 | -1560 |
|      |                     |         |      |     | 3250     | 3300 | 0.013 | 2511 | -2107 | 404   |
|      |                     |         |      |     | 3200     | 3250 | 0.019 | 1569 | -2217 | -647  |
|      |                     |         |      |     | 3150     | 3200 | 0.066 | 1557 | -2203 | -646  |
|      |                     |         |      |     | 3100     | 3150 | 0.099 | 1383 | -2538 | -1154 |
| 29.5 | CARESER OCCIDENTALE | IT      | 2010 | FLO | 3050     | 3100 | 0.003 | 1303 | -2916 | -1613 |
|      |                     |         |      |     | 3050     | 3300 | 0.2   | 1529 | -2375 | -846  |
|      |                     |         |      |     | 3250     | 3300 | 0.013 | 1343 | -1220 | 122   |
|      |                     |         |      |     | 3200     | 3250 | 0.017 | 1231 | -1495 | -264  |
|      |                     |         |      |     | 3150     | 3200 | 0.062 | 1385 | -1833 | -449  |
|      |                     |         |      |     | 3100     | 3150 | 0.099 | 1094 | -2282 | -1189 |
| 30.1 | CARESER ORIENTALE   | IT      | 2006 | FXD | 3050     | 3100 | 0.002 | 1064 | -2543 | -1480 |
|      |                     |         |      |     | 3050     | 3300 | 0.194 | 1215 | -2002 | -787  |
|      |                     |         |      |     | 3250     | 3300 | 0.004 | 679  | -2611 | -1932 |
|      |                     |         |      |     | 3200     | 3250 | 0.015 | 692  | -2616 | -1924 |
|      |                     |         |      |     | 3150     | 3200 | 0.063 | 878  | -2621 | -1743 |
|      |                     |         |      |     | 3100     | 3150 | 0.265 | 830  | -2556 | -1726 |
|      |                     |         |      |     | 3050     | 3100 | 0.81  | 890  | -2663 | -1773 |
|      |                     |         |      |     | 3000     | 3050 | 0.412 | 821  | -3005 | -2184 |
|      |                     |         |      |     | 2950     | 3000 | 0.35  | 800  | -3343 | -2543 |
|      |                     |         |      |     | 2900     | 2950 | 0.135 | 679  | -3801 | -3122 |
| 30.2 | CARESER ORIENTALE   | IT      | 2007 | FXD | 2850     | 2900 | 0.074 | 641  | -4062 | -3421 |
|      |                     |         |      |     | 2850     | 3300 | 2.128 | 830  | -2947 | -2117 |
|      |                     |         |      |     | 3250     | 3300 | 0.004 | 762  | -2814 | -2052 |
|      |                     |         |      |     | 3200     | 3250 | 0.015 | 491  | -2771 | -2280 |
|      |                     |         |      |     | 3150     | 3200 | 0.063 | 272  | -2701 | -2429 |
|      |                     |         |      |     | 3100     | 3150 | 0.265 | 430  | -2578 | -2148 |
|      |                     |         |      |     | 3050     | 3100 | 0.81  | 444  | -2805 | -2361 |
|      |                     |         |      |     | 3000     | 3050 | 0.412 | 335  | -3270 | -2934 |

| NR   | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                   |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 30.3 | CARESER ORIENTALE | IT      | 2008 | OTH | 2950     | 3000 | 0.35  | 327  | -3656 | -3329 |
|      |                   |         |      |     | 2900     | 2950 | 0.135 | 277  | -4176 | -3899 |
|      |                   |         |      |     | 2850     | 2900 | 0.074 | 196  | -4453 | -4257 |
|      |                   |         |      |     | 2850     | 3300 | 2.128 | 379  | -3147 | -2769 |
|      |                   |         |      |     | 3250     | 3300 | 0.004 | 476  | -2228 | -1752 |
|      |                   |         |      |     | 3200     | 3250 | 0.015 | 598  | -2282 | -1684 |
|      |                   |         |      |     | 3150     | 3200 | 0.058 | 583  | -2394 | -1811 |
|      |                   |         |      |     | 3100     | 3150 | 0.234 | 713  | -2225 | -1512 |
|      |                   |         |      |     | 3050     | 3100 | 0.7   | 814  | -2302 | -1487 |
|      |                   |         |      |     | 3000     | 3050 | 0.298 | 687  | -2853 | -2166 |
| 30.4 | CARESER ORIENTALE | IT      | 2009 | OTH | 2950     | 3000 | 0.275 | 675  | -3137 | -2462 |
|      |                   |         |      |     | 2900     | 2950 | 0.074 | 636  | -3560 | -2924 |
|      |                   |         |      |     | 2850     | 2900 | 0.038 | 578  | -3823 | -3245 |
|      |                   |         |      |     | 2850     | 3300 | 2.13  | 823  | -2808 | -1884 |
|      |                   |         |      |     | 3250     | 3300 | 0.004 | 1069 | -2028 | -959  |
|      |                   |         |      |     | 3200     | 3250 | 0.015 | 1117 | -2100 | -984  |
|      |                   |         |      |     | 3150     | 3200 | 0.058 | 1070 | -2285 | -1215 |
|      |                   |         |      |     | 3100     | 3150 | 0.234 | 1252 | -2281 | -1029 |
|      |                   |         |      |     | 3050     | 3100 | 0.7   | 1390 | -2297 | -907  |
|      |                   |         |      |     | 3000     | 3050 | 0.298 | 1352 | -2832 | -1480 |
| 30.5 | CARESER ORIENTALE | IT      | 2010 | FLO | 2950     | 3000 | 0.275 | 1315 | -3109 | -1794 |
|      |                   |         |      |     | 2900     | 2950 | 0.074 | 1259 | -3494 | -2235 |
|      |                   |         |      |     | 2850     | 2900 | 0.038 | 1121 | -3735 | -2614 |
|      |                   |         |      |     | 2850     | 3300 | 1.696 | 1326 | -2602 | -1276 |
|      |                   |         |      |     | 3250     | 3300 | 0.003 | 1390 | -1241 | 149   |
|      |                   |         |      |     | 3200     | 3250 | 0.014 | 1124 | -1240 | -116  |
|      |                   |         |      |     | 3150     | 3200 | 0.057 | 721  | -1295 | -574  |
|      |                   |         |      |     | 3100     | 3150 | 0.247 | 958  | -1303 | -345  |
|      |                   |         |      |     | 3050     | 3100 | 0.648 | 1124 | -1573 | -449  |
|      |                   |         |      |     | 3000     | 3050 | 0.225 | 1079 | -2319 | -1239 |
| 31.1 | CIARDONEY         | IT0081  | 2006 | COM | 2950     | 3000 | 0.177 | 980  | -2827 | -1848 |
|      |                   |         |      |     | 2900     | 2950 | 0.046 | 790  | -3584 | -2794 |
|      |                   |         |      |     | 2850     | 2900 | 0.014 | 864  | -3991 | -3127 |
|      |                   |         |      |     | 2850     | 3300 | 1.432 | 1042 | -1872 | -830  |
|      |                   |         |      |     | 3120     | 3160 | 0.182 | 894  | -2164 | -1270 |
|      |                   |         |      |     | 3080     | 3120 | 0.178 | 670  | -2340 | -1670 |
|      |                   |         |      |     | 3020     | 3080 | 0.225 | 825  | -3026 | -2201 |
|      |                   |         |      |     | 2910     | 3020 | 0.155 | 780  | -3103 | -2323 |
|      |                   |         |      |     | 2850     | 2910 | 0.093 | 780  | -3320 | -2540 |
|      |                   |         |      |     | 2850     | 3160 | 0.833 | 784  | -2883 | -2099 |
| 31.2 | CIARDONEY         | IT0081  | 2007 | COM | 3120     | 3160 | 0.182 | 1284 | -1997 | -713  |
|      |                   |         |      |     | 3080     | 3120 | 0.178 | 1126 | -2153 | -1027 |
|      |                   |         |      |     | 3020     | 3080 | 0.225 | 964  | -2617 | -1653 |
|      |                   |         |      |     | 2910     | 3020 | 0.155 | 964  | -2704 | -1740 |
|      |                   |         |      |     | 2850     | 2910 | 0.093 | 754  | -2590 | -1836 |
|      |                   |         |      |     | 2850     | 3160 | 0.833 | 980  | -2470 | -1490 |
| 31.3 | CIARDONEY         | IT0081  | 2008 | COM | 3120     | 3160 | 0.182 | 1695 | -2217 | -522  |
|      |                   |         |      |     | 3080     | 3120 | 0.178 | 1297 | -2472 | -1175 |
|      |                   |         |      |     | 3020     | 3080 | 0.225 | 1347 | -2783 | -1436 |
|      |                   |         |      |     | 2910     | 3020 | 0.155 | 997  | -2885 | -1888 |
|      |                   |         |      |     | 2850     | 2910 | 0.093 | 698  | -2699 | -2001 |
|      |                   |         |      |     | 2850     | 3160 | 0.833 | 1160 | -2670 | -1510 |
| 31.4 | CIARDONEY         | IT0081  | 2009 | COM | 3120     | 3160 | 0.182 | 2278 | -2334 | -56   |
|      |                   |         |      |     | 3080     | 3120 | 0.178 | 1916 | -1997 | -81   |

| NR   | GLACIER NAME             | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                          |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 31.5 | CIARDONEY                | IT0081  | 2010 | COM | 3020     | 3080 | 0.225 | 1720 | -2253 | -533  |
|      |                          |         |      |     | 2910     | 3020 | 0.155 | 1800 | -2531 | -731  |
|      |                          |         |      |     | 2850     | 2910 | 0.093 | 1760 | -2543 | -783  |
|      |                          |         |      |     | 2850     | 3160 | 0.833 | 1840 | -2330 | -490  |
|      |                          |         |      |     | 3120     | 3160 | 0.182 | 1208 | -1058 | 150   |
|      |                          |         |      |     | 3080     | 3120 | 0.178 | 1152 | -1413 | -261  |
|      |                          |         |      |     | 3020     | 3080 | 0.225 | 1105 | -1740 | -635  |
|      |                          |         |      |     | 2910     | 3020 | 0.155 | 972  | -2033 | -1061 |
|      |                          |         |      |     | 2850     | 2910 | 0.093 | 852  | -2679 | -1827 |
|      |                          |         |      |     | 2850     | 3160 | 0.833 | 1040 | -1870 | -830  |
| 32.1 | FONT. BIANCA / WEISSB.F. | IT0713  | 2006 | FLO | 3350     | 3400 | 0     | 1400 | -3400 | -2000 |
|      |                          |         |      |     | 3300     | 3350 | 0.008 | 1054 | -3241 | -2187 |
|      |                          |         |      |     | 3250     | 3300 | 0.008 | 985  | -3685 | -2700 |
|      |                          |         |      |     | 3200     | 3250 | 0.036 | 965  | -3364 | -2398 |
|      |                          |         |      |     | 3150     | 3200 | 0.058 | 973  | -3126 | -2153 |
|      |                          |         |      |     | 3100     | 3150 | 0.091 | 896  | -2873 | -1977 |
|      |                          |         |      |     | 3050     | 3100 | 0.124 | 901  | -2436 | -1535 |
|      |                          |         |      |     | 3000     | 3050 | 0.112 | 950  | -2454 | -1504 |
|      |                          |         |      |     | 2950     | 3000 | 0.056 | 972  | -2496 | -1524 |
|      |                          |         |      |     | 2900     | 2950 | 0.045 | 855  | -2383 | -1529 |
|      |                          |         |      |     | 2850     | 2900 | 0.001 | 800  | -2396 | -1596 |
|      |                          |         |      |     | 2850     | 3400 | 0.538 | 929  | -2682 | -1753 |
|      |                          |         |      |     | 3350     | 3400 | 0     | 1000 | -2400 | -1400 |
| 32.2 | FONT. BIANCA / WEISSB.F. | IT0713  | 2007 | FLO | 3300     | 3350 | 0.005 | 961  | -2361 | -1400 |
|      |                          |         |      |     | 3250     | 3300 | 0.005 | 740  | -3045 | -2304 |
|      |                          |         |      |     | 3200     | 3250 | 0.031 | 611  | -2996 | -2385 |
|      |                          |         |      |     | 3150     | 3200 | 0.05  | 713  | -2796 | -2083 |
|      |                          |         |      |     | 3100     | 3150 | 0.08  | 542  | -2433 | -1891 |
|      |                          |         |      |     | 3050     | 3100 | 0.122 | 560  | -2054 | -1494 |
|      |                          |         |      |     | 3000     | 3050 | 0.104 | 669  | -2029 | -1361 |
|      |                          |         |      |     | 2950     | 3000 | 0.052 | 640  | -1860 | -1220 |
|      |                          |         |      |     | 2900     | 2950 | 0.039 | 592  | -1859 | -1267 |
|      |                          |         |      |     | 2850     | 2900 | 0.002 | 500  | -1800 | -1300 |
|      |                          |         |      |     | 2850     | 3400 | 0.49  | 616  | -2223 | -1607 |
|      |                          |         |      |     | 3300     | 3350 | 0.01  |      |       | -1300 |
|      |                          |         |      |     | 3250     | 3300 | 0.027 |      |       | -1224 |
| 32.3 | FONT. BIANCA / WEISSB.F. | IT0713  | 2008 | FLO | 3200     | 3250 | 0.083 |      |       | -1198 |
|      |                          |         |      |     | 3150     | 3200 | 0.121 |      |       | -1089 |
|      |                          |         |      |     | 3100     | 3150 | 0.093 |      |       | -1285 |
|      |                          |         |      |     | 3050     | 3100 | 0.049 |      |       | -1380 |
|      |                          |         |      |     | 3000     | 3050 | 0.039 |      |       | -1504 |
|      |                          |         |      |     | 2950     | 3000 | 0.008 |      |       | -1599 |
|      |                          |         |      |     | 2900     | 2950 | 0.006 |      |       | -1212 |
|      |                          |         |      |     | 2850     | 2900 | 0     |      |       | -931  |
|      |                          |         |      |     | 2850     | 3350 | 0.437 | 862  | -2108 | -1246 |
|      |                          |         |      |     | 3300     | 3350 | 0.01  | 1674 | -1589 | 85    |
|      |                          |         |      |     | 3250     | 3300 | 0.027 | 1778 | -1701 | 77    |
|      |                          |         |      |     | 3200     | 3250 | 0.083 | 1556 | -1533 | 23    |
|      |                          |         |      |     | 3150     | 3200 | 0.121 | 1392 | -1444 | -52   |
| 32.4 | FONT. BIANCA / WEISSB.F. | IT0713  | 2010 | FLO | 3100     | 3150 | 0.093 | 1029 | -1520 | -491  |
|      |                          |         |      |     | 3050     | 3100 | 0.049 | 1044 | -1506 | -461  |
|      |                          |         |      |     | 3000     | 3050 | 0.039 | 1194 | -1505 | -310  |
|      |                          |         |      |     | 2950     | 3000 | 0.008 | 1293 | -1414 | -121  |
|      |                          |         |      |     | 2900     | 2950 | 0.006 | 1219 | -1585 | -366  |
|      |                          |         |      |     | 2850     | 2900 | 0     | 1300 | -1800 | -500  |
|      |                          |         |      |     | 2850     | 3350 | 0.437 | 1316 | -1511 | -195  |
|      |                          |         |      |     | 3300     | 3350 | 0.01  | 1674 | -1589 | 85    |
|      |                          |         |      |     | 3250     | 3300 | 0.027 | 1778 | -1701 | 77    |
|      |                          |         |      |     | 3200     | 3250 | 0.083 | 1556 | -1533 | 23    |

| NR   | GLACIER NAME             | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                          |         |      |     | FROM     | TO   |       |      |       |       |
|      |                          |         |      |     |          |      | KM²   | MM   | MM    | MM    |
| 33.1 | GRAND ETRET              | IT0134  | 2008 | FXD | 2940     | 3000 | 0.326 | 1310 | -2418 | -1108 |
|      |                          |         |      |     | 2880     | 2940 | 0.098 | 1682 | -2961 | -1279 |
|      |                          |         |      |     | 2820     | 2880 | 0.057 | 1170 | -2910 | -1740 |
|      |                          |         |      |     | 2760     | 2820 | 0.043 | 974  | -3401 | -2427 |
|      |                          |         |      |     | 2700     | 2760 | 0.029 | 1052 | -3244 | -2192 |
|      |                          |         |      |     | 2700     | 3000 | 0.553 | 1322 | -2685 | -1363 |
| 34.1 | LUNGA (VEDR.) / LANGENF. | IT0733  | 2008 | FXD | 3350     | 3400 | 0.013 |      |       | -350  |
|      |                          |         |      |     | 3300     | 3350 | 0.063 |      |       | 64    |
|      |                          |         |      |     | 3250     | 3300 | 0.263 |      |       | -452  |
|      |                          |         |      |     | 3200     | 3250 | 0.311 |      |       | -1131 |
|      |                          |         |      |     | 3150     | 3200 | 0.164 |      |       | -1508 |
|      |                          |         |      |     | 3100     | 3150 | 0.193 |      |       | -1366 |
|      |                          |         |      |     | 3050     | 3100 | 0.225 |      |       | -1622 |
|      |                          |         |      |     | 3000     | 3050 | 0.106 |      |       | -1818 |
|      |                          |         |      |     | 2950     | 3000 | 0.085 |      |       | -1975 |
|      |                          |         |      |     | 2900     | 2950 | 0.081 |      |       | -2651 |
|      |                          |         |      |     | 2850     | 2900 | 0.063 |      |       | -2881 |
|      |                          |         |      |     | 2800     | 2850 | 0.058 |      |       | -3385 |
|      |                          |         |      |     | 2750     | 2800 | 0.102 |      |       | -3831 |
|      |                          |         |      |     | 2700     | 2750 | 0.044 |      |       | -4483 |
|      |                          |         |      |     | 2650     | 2700 | 0.004 |      |       | -4900 |
|      |                          |         |      |     | 2650     | 3400 | 0     | 849  | -2486 | -1637 |
| 34.2 | LUNGA (VEDR.) / LANGENF. | IT0733  | 2009 | FXD | 3350     | 3400 | 0.013 | 1455 | -1504 | -49   |
|      |                          |         |      |     | 3300     | 3350 | 0.063 | 1605 | -1387 | 218   |
|      |                          |         |      |     | 3250     | 3300 | 0.263 | 1468 | -1555 | -87   |
|      |                          |         |      |     | 3200     | 3250 | 0.311 | 1381 | -2006 | -625  |
|      |                          |         |      |     | 3150     | 3200 | 0.164 | 1328 | -1834 | -506  |
|      |                          |         |      |     | 3100     | 3150 | 0.193 | 1192 | -1984 | -792  |
|      |                          |         |      |     | 3050     | 3100 | 0.225 | 1208 | -2180 | -972  |
|      |                          |         |      |     | 3000     | 3050 | 0.106 | 1219 | -2477 | -1258 |
|      |                          |         |      |     | 2950     | 3000 | 0.085 | 1357 | -2563 | -1206 |
|      |                          |         |      |     | 2900     | 2950 | 0.081 | 1403 | -2959 | -1556 |
|      |                          |         |      |     | 2850     | 2900 | 0.063 | 1362 | -3162 | -1799 |
|      |                          |         |      |     | 2800     | 2850 | 0.058 | 1189 | -3355 | -2166 |
|      |                          |         |      |     | 2750     | 2800 | 0.102 | 1440 | -4500 | -3060 |
|      |                          |         |      |     | 2700     | 2750 | 0.044 | 1427 | -5614 | -4187 |
|      |                          |         |      |     | 2650     | 2700 | 0.004 | 1500 | -5750 | -4250 |
|      |                          |         |      |     | 2650     | 3400 | 1.776 | 1343 | -2341 | -998  |
| 34.3 | LUNGA (VEDR.) / LANGENF. | IT0733  | 2010 | FXD | 3350     | 3400 | 0.013 | 1028 | -903  | 124   |
|      |                          |         |      |     | 3300     | 3350 | 0.063 | 1136 | -858  | 278   |
|      |                          |         |      |     | 3250     | 3300 | 0.263 | 1033 | -984  | 49    |
|      |                          |         |      |     | 3200     | 3250 | 0.311 | 911  | -1198 | -286  |
|      |                          |         |      |     | 3150     | 3200 | 0.164 | 949  | -1048 | -99   |
|      |                          |         |      |     | 3100     | 3150 | 0.193 | 1126 | -1475 | -349  |
|      |                          |         |      |     | 3050     | 3100 | 0.225 | 1032 | -1599 | -567  |
|      |                          |         |      |     | 3000     | 3050 | 0.106 | 1192 | -1937 | -746  |
|      |                          |         |      |     | 2950     | 3000 | 0.085 | 1345 | -2151 | -805  |
|      |                          |         |      |     | 2900     | 2950 | 0.081 | 1183 | -2344 | -1161 |
|      |                          |         |      |     | 2850     | 2900 | 0.063 | 1246 | -2424 | -1178 |
|      |                          |         |      |     | 2800     | 2850 | 0.058 | 1288 | -3124 | -1836 |
|      |                          |         |      |     | 2750     | 2800 | 0.102 | 1168 | -4094 | -2925 |
|      |                          |         |      |     | 2700     | 2750 | 0.044 | 1172 | -4969 | -3797 |
|      |                          |         |      |     | 2650     | 2700 | 0.004 | 1150 | -5024 | -3874 |
|      |                          |         |      |     | 2650     | 3400 | 1.776 | 1076 | -1735 | -659  |
| 35.1 | MALAVALLE / UEBELTALF.   | IT0875  | 2006 | FLO | 3400     | 3450 | 0.088 | 1830 | -2900 | -1070 |
|      |                          |         |      |     | 3350     | 3400 | 0.116 | 1746 | -2628 | -882  |
|      |                          |         |      |     | 3300     | 3350 | 0.155 | 1626 | -2239 | -613  |

| NR   | GLACIER NAME           | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|------------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                        |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                        |         |      |     | 3250     | 3300 | 0.282 | 1431 | -1585 | -154  |
|      |                        |         |      |     | 3200     | 3250 | 0.352 | 1334 | -1431 | -97   |
|      |                        |         |      |     | 3150     | 3200 | 0.765 | 1296 | -1578 | -282  |
|      |                        |         |      |     | 3100     | 3150 | 0.417 | 1357 | -1882 | -525  |
|      |                        |         |      |     | 3050     | 3100 | 0.675 | 1316 | -2064 | -748  |
|      |                        |         |      |     | 3000     | 3050 | 0.564 | 1149 | -2373 | -1224 |
|      |                        |         |      |     | 2950     | 3000 | 0.617 | 1249 | -2537 | -1288 |
|      |                        |         |      |     | 2900     | 2950 | 0.769 | 1327 | -2799 | -1472 |
|      |                        |         |      |     | 2850     | 2900 | 0.69  | 1246 | -3063 | -1817 |
|      |                        |         |      |     | 2800     | 2850 | 0.491 | 1122 | -3271 | -2149 |
|      |                        |         |      |     | 2750     | 2800 | 0.399 | 840  | -3441 | -2601 |
|      |                        |         |      |     | 2700     | 2750 | 0.385 | 651  | -3634 | -2983 |
|      |                        |         |      |     | 2650     | 2700 | 0.156 | 260  | -3917 | -3657 |
|      |                        |         |      |     | 2600     | 2650 | 0.225 | 63   | -4149 | -4086 |
|      |                        |         |      |     | 2550     | 2600 | 0.053 | -40  | -4252 | -4292 |
|      |                        |         |      |     | 2550     | 3450 | 7.198 | 1170 | -2578 | -1408 |
| 35.2 | MALAVALLE / UEBELTALF. | IT0875  | 2007 | FLO | 3400     | 3540 | 0.088 | 893  | -400  | 493   |
|      |                        |         |      |     | 3350     | 3400 | 0.116 | 890  | -421  | 469   |
|      |                        |         |      |     | 3300     | 3350 | 0.155 | 861  | -588  | 273   |
|      |                        |         |      |     | 3250     | 3300 | 0.282 | 862  | -805  | 57    |
|      |                        |         |      |     | 3200     | 3250 | 0.352 | 907  | -951  | -44   |
|      |                        |         |      |     | 3150     | 3200 | 0.765 | 869  | -1207 | -338  |
|      |                        |         |      |     | 3100     | 3150 | 0.417 | 866  | -1458 | -593  |
|      |                        |         |      |     | 3050     | 3100 | 0.675 | 845  | -1689 | -844  |
|      |                        |         |      |     | 3000     | 3050 | 0.564 | 772  | -1900 | -1128 |
|      |                        |         |      |     | 2950     | 3000 | 0.617 | 722  | -2157 | -1435 |
|      |                        |         |      |     | 2900     | 2950 | 0.769 | 746  | -2348 | -1602 |
|      |                        |         |      |     | 2850     | 2900 | 0.69  | 686  | -2576 | -1890 |
|      |                        |         |      |     | 2800     | 2850 | 0.491 | 600  | -2817 | -2217 |
|      |                        |         |      |     | 2750     | 2800 | 0.399 | 539  | -3048 | -2509 |
|      |                        |         |      |     | 2700     | 2750 | 0.385 | 480  | -3302 | -2822 |
|      |                        |         |      |     | 2650     | 2700 | 0.156 | 401  | -3540 | -3139 |
|      |                        |         |      |     | 2600     | 2650 | 0.225 | 310  | -3766 | -3456 |
|      |                        |         |      |     | 2550     | 2600 | 0.053 | 232  | -3942 | -3710 |
|      |                        |         |      |     | 2550     | 3540 | 7.198 | 728  | -2066 | -1338 |
| 35.3 | MALAVALLE / UEBELTALF. | IT0875  | 2008 | FLO | 3400     | 3450 | 0.08  | 950  | -611  | 339   |
|      |                        |         |      |     | 3350     | 3400 | 0.1   | 989  | -772  | 217   |
|      |                        |         |      |     | 3300     | 3350 | 0.154 | 1100 | -923  | 177   |
|      |                        |         |      |     | 3250     | 3300 | 0.197 | 1269 | -1032 | 237   |
|      |                        |         |      |     | 3200     | 3250 | 0.253 | 1346 | -1190 | 156   |
|      |                        |         |      |     | 3150     | 3200 | 0.597 | 1302 | -1465 | -163  |
|      |                        |         |      |     | 3100     | 3150 | 0.538 | 1454 | -1816 | -362  |
|      |                        |         |      |     | 3050     | 3100 | 0.548 | 1438 | -2060 | -622  |
|      |                        |         |      |     | 3000     | 3050 | 0.63  | 1350 | -2193 | -843  |
|      |                        |         |      |     | 2950     | 3000 | 0.473 | 1225 | -2290 | -1065 |
|      |                        |         |      |     | 2900     | 2950 | 0.575 | 1198 | -2286 | -1088 |
|      |                        |         |      |     | 2850     | 2900 | 0.764 | 1142 | -2450 | -1308 |
|      |                        |         |      |     | 2800     | 2850 | 0.437 | 1121 | -2625 | -1504 |
|      |                        |         |      |     | 2750     | 2800 | 0.333 | 1009 | -2806 | -1797 |
|      |                        |         |      |     | 2700     | 2750 | 0.152 | 866  | -2972 | -2106 |
|      |                        |         |      |     | 2650     | 2700 | 0.222 | 744  | -3130 | -2386 |
|      |                        |         |      |     | 2600     | 2650 | 0.063 | 592  | -3317 | -2725 |
|      |                        |         |      |     | 2550     | 2600 | 0.048 | 487  | -3456 | -2969 |
|      |                        |         |      |     | 2550     | 3450 | 7.198 | 1210 | -2110 | -900  |
| 35.4 | MALAVALLE / UEBELTALF. | IT0875  | 2009 | FLO | 3400     | 3450 | 0.08  | 1634 | -1356 | 120   |
|      |                        |         |      |     | 3350     | 3400 | 0.1   | 1685 | -1465 | 126   |
|      |                        |         |      |     | 3300     | 3350 | 0.154 | 1725 | -1551 | 90    |
|      |                        |         |      |     | 3250     | 3300 | 0.197 | 1728 | -1644 | 36    |

| NR   | GLACIER NAME           | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|------------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                        |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                        |         |      |     | 3200     | 3250 | 0.253 | 1759 | -1724 | -40   |
|      |                        |         |      |     | 3150     | 3200 | 0.597 | 1711 | -1820 | -101  |
|      |                        |         |      |     | 3100     | 3150 | 0.538 | 1623 | -1845 | -179  |
|      |                        |         |      |     | 3050     | 3100 | 0.548 | 1614 | -1787 | -207  |
|      |                        |         |      |     | 3000     | 3050 | 0.63  | 1596 | -1977 | -405  |
|      |                        |         |      |     | 2950     | 3000 | 0.473 | 1535 | -2016 | -462  |
|      |                        |         |      |     | 2900     | 2950 | 0.575 | 1498 | -2147 | -652  |
|      |                        |         |      |     | 2850     | 2900 | 0.764 | 1449 | -2107 | -648  |
|      |                        |         |      |     | 2800     | 2850 | 0.437 | 1376 | -2066 | -655  |
|      |                        |         |      |     | 2750     | 2800 | 0.333 | 1305 | -2398 | -1058 |
|      |                        |         |      |     | 2700     | 2750 | 0.152 | 1248 | -2941 | -1670 |
|      |                        |         |      |     | 2650     | 2700 | 0.222 | 1167 | -3441 | -2226 |
|      |                        |         |      |     | 2600     | 2650 | 0.063 | 1105 | -3269 | -2132 |
|      |                        |         |      |     | 2550     | 2600 | 0.048 | 1050 | -2830 | -1775 |
|      |                        |         |      |     | 2550     | 3450 | 7.198 | 1529 | -2046 | -517  |
| 35.5 | MALAVALLE / UEBELTALF. | IT0875  | 2010 | FLO | 3400     | 3450 | 0.08  | 1200 | -787  | 412   |
|      |                        |         |      |     | 3350     | 3400 | 0.1   | 1249 | -827  | 422   |
|      |                        |         |      |     | 3300     | 3350 | 0.154 | 1326 | -682  | 644   |
|      |                        |         |      |     | 3250     | 3300 | 0.197 | 1370 | -405  | 965   |
|      |                        |         |      |     | 3200     | 3250 | 0.253 | 1317 | -569  | 749   |
|      |                        |         |      |     | 3150     | 3200 | 0.597 | 1192 | -668  | 524   |
|      |                        |         |      |     | 3100     | 3150 | 0.538 | 1173 | -973  | 199   |
|      |                        |         |      |     | 3050     | 3100 | 0.548 | 1247 | -1065 | 182   |
|      |                        |         |      |     | 3000     | 3050 | 0.63  | 1254 | -1232 | 22    |
|      |                        |         |      |     | 2950     | 3000 | 0.473 | 1245 | -1538 | -293  |
|      |                        |         |      |     | 2900     | 2950 | 0.575 | 1282 | -1687 | -406  |
|      |                        |         |      |     | 2850     | 2900 | 0.764 | 1283 | -1830 | -547  |
|      |                        |         |      |     | 2800     | 2850 | 0.437 | 1135 | -1864 | -730  |
|      |                        |         |      |     | 2750     | 2800 | 0.333 | 1045 | -2002 | -958  |
|      |                        |         |      |     | 2700     | 2750 | 0.152 | 943  | -2120 | -1176 |
|      |                        |         |      |     | 2650     | 2700 | 0.222 | 429  | -2459 | -2030 |
|      |                        |         |      |     | 2600     | 2600 | 0.048 | 269  | -2521 | -2252 |
|      |                        |         |      |     | 2600     | 2650 | 0.063 | 340  | -2588 | -2248 |
|      |                        |         |      |     | 2600     | 3450 | 7.198 | 1179 | -1376 | -197  |
| 36.1 | PENDENTE / HANGENDERF. | IT0876  | 2006 | FLO | 2950     | 3000 | 0.036 | 1980 | -2630 | -650  |
|      |                        |         |      |     | 2900     | 2950 | 0.112 | 1932 | -2692 | -760  |
|      |                        |         |      |     | 2850     | 2900 | 0.194 | 1790 | -3098 | -1309 |
|      |                        |         |      |     | 2800     | 2850 | 0.142 | 1662 | -3317 | -1656 |
|      |                        |         |      |     | 2750     | 2800 | 0.235 | 1387 | -3493 | -2105 |
|      |                        |         |      |     | 2700     | 2750 | 0.22  | 1277 | -3595 | -2318 |
|      |                        |         |      |     | 2650     | 2700 | 0.087 | 945  | -3474 | -2529 |
|      |                        |         |      |     | 2600     | 2650 | 0.007 | 787  | -3337 | -2550 |
|      |                        |         |      |     | 2600     | 3000 | 1.033 | 1517 | -3297 | -1780 |
| 36.2 | PENDENTE / HANGENDERF  | IT0876  | 2007 | FLO | 2950     | 3000 | 0.022 | 1341 | -2687 | -1346 |
|      |                        |         |      |     | 2900     | 2950 | 0.112 | 1231 | -2640 | -1408 |
|      |                        |         |      |     | 2850     | 2900 | 0.145 | 1112 | -2791 | -1680 |
|      |                        |         |      |     | 2800     | 2850 | 0.146 | 833  | -2948 | -2115 |
|      |                        |         |      |     | 2750     | 2800 | 0.244 | 674  | -2869 | -2195 |
|      |                        |         |      |     | 2700     | 2750 | 0.221 | 528  | -2979 | -2451 |
|      |                        |         |      |     | 2650     | 2700 | 0.095 | 267  | -3379 | -3112 |
|      |                        |         |      |     | 2600     | 2650 | 0.007 | 7    | -3495 | -3488 |
|      |                        |         |      |     | 2600     | 3000 | 0.993 | 763  | -2917 | -2154 |
| 36.3 | PENDENTE / HANGENDERF. | IT0876  | 2008 | FLO | 2950     | 3000 | 0.004 | 1906 | -2640 | -734  |
|      |                        |         |      |     | 2900     | 2950 | 0.048 | 1857 | -2730 | -873  |
|      |                        |         |      |     | 2850     | 2900 | 0.172 | 1730 | -2786 | -1056 |
|      |                        |         |      |     | 2800     | 2850 | 0.134 | 1600 | -2932 | -1332 |
|      |                        |         |      |     | 2750     | 2800 | 0.189 | 1502 | -3111 | -1609 |

| NR                 | GLACIER NAME                | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|--------------------|-----------------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|                    |                             |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|                    |                             |         |      |     | 2700     | 2750 | 0.214 | 1427 | -3158 | -1731 |
|                    |                             |         |      |     | 2650     | 2700 | 0.086 | 1258 | -3265 | -2007 |
|                    |                             |         |      |     | 2600     | 2650 | 0.006 | 1115 | -3343 | -2228 |
|                    |                             |         |      |     | 2600     | 3000 | 0.852 | 1539 | -3023 | -1484 |
| 36.4               | PENDENTE / HANGENDERF       | IT0876  | 2009 | FLO | 2950     | 3000 | 0.004 | 2600 | -2882 | -282  |
|                    |                             |         |      |     | 2900     | 2950 | 0.048 | 2600 | -2733 | -133  |
|                    |                             |         |      |     | 2850     | 2900 | 0.172 | 2497 | -2853 | -356  |
|                    |                             |         |      |     | 2800     | 2850 | 0.134 | 2480 | -3333 | -853  |
|                    |                             |         |      |     | 2750     | 2800 | 0.189 | 2507 | -3358 | -851  |
|                    |                             |         |      |     | 2700     | 2750 | 0.214 | 2493 | -3565 | -1072 |
|                    |                             |         |      |     | 2650     | 2700 | 0.086 | 1762 | -3335 | -1573 |
|                    |                             |         |      |     | 2600     | 2650 | 0.006 | 1242 | -3129 | -1887 |
|                    |                             |         |      |     | 2600     | 3000 | 0.852 | 2418 | -3262 | -844  |
| 36.5               | PENDENTE / HANGENDERF.      | IT0876  | 2010 | FLO | 2950     | 3000 | 0.004 | 1606 | -1237 | 369   |
|                    |                             |         |      |     | 2900     | 2950 | 0.048 | 1839 | -1457 | 382   |
|                    |                             |         |      |     | 2850     | 2900 | 0.172 | 1836 | -1738 | 99    |
|                    |                             |         |      |     | 2800     | 2850 | 0.134 | 1710 | -1840 | -130  |
|                    |                             |         |      |     | 2750     | 2800 | 0.189 | 1750 | -1719 | 30    |
|                    |                             |         |      |     | 2700     | 2750 | 0.214 | 1651 | -1832 | -182  |
|                    |                             |         |      |     | 2650     | 2700 | 0.086 | 1408 | -2463 | -1055 |
|                    |                             |         |      |     | 2600     | 2650 | 0.006 | 1284 | -2940 | -1656 |
|                    |                             |         |      |     | 2600     | 3000 | 0.852 | 1703 | -1837 | -134  |
| 37.1               | RIES OCC. / RIESERF. WESTL. | IT0930  | 2010 | FLO | 3200     | 3250 | 0.016 | 1423 | -1288 | 135   |
|                    |                             |         |      |     | 3150     | 3200 | 0.178 | 1296 | -1185 | 112   |
|                    |                             |         |      |     | 3100     | 3150 | 0.216 | 1193 | -983  | 210   |
|                    |                             |         |      |     | 3050     | 3100 | 0.257 | 1252 | -1252 | -1    |
|                    |                             |         |      |     | 3000     | 3050 | 0.263 | 1230 | -1385 | -155  |
|                    |                             |         |      |     | 2950     | 3000 | 0.244 | 1063 | -1394 | -331  |
|                    |                             |         |      |     | 2900     | 2950 | 0.252 | 1068 | -1706 | -638  |
|                    |                             |         |      |     | 2850     | 2900 | 0.201 | 1054 | -1985 | -930  |
|                    |                             |         |      |     | 2800     | 2850 | 0.172 | 1042 | -2168 | -1126 |
|                    |                             |         |      |     | 2750     | 2800 | 0.076 | 1099 | -2815 | -1716 |
|                    |                             |         |      |     | 2700     | 2750 | 0.042 | 1008 | -2808 | -1800 |
|                    |                             |         |      |     | 2650     | 2700 | 0.036 | 827  | -2971 | -2144 |
|                    |                             |         |      |     | 2600     | 2650 | 0.02  | 800  | -2950 | -2150 |
|                    |                             |         |      |     | 2550     | 2600 | 0.003 | 800  | -2950 | -2150 |
|                    |                             |         |      |     | 2550     | 3250 | 1.975 | 1139 | -1608 | -469  |
| <u>NEW ZEALAND</u> |                             |         |      |     |          |      |       |      |       |       |
| 38.1               | BREWSTER                    | NZ      | 2006 | COM | 2400     | 2491 | 0.003 | 4021 | -750  | 3271  |
|                    |                             |         |      |     | 2300     | 2400 | 0.068 | 3753 | -883  | 2869  |
|                    |                             |         |      |     | 2200     | 2300 | 0.145 | 3465 | -1316 | 2188  |
|                    |                             |         |      |     | 2100     | 2200 | 0.19  | 3165 | -1493 | 1672  |
|                    |                             |         |      |     | 2000     | 2100 | 0.249 | 2809 | -1798 | 1011  |
|                    |                             |         |      |     | 1900     | 2000 | 1.046 | 2525 | -2105 | 420   |
|                    |                             |         |      |     | 1800     | 1900 | 0.582 | 2135 | -2454 | -319  |
|                    |                             |         |      |     | 1700     | 1800 | 0.234 | 1418 | -3654 | -2236 |
|                    |                             |         |      |     | 1656     | 1700 | 0.026 | 679  | -4708 | -4029 |
|                    |                             |         |      |     | 1656     | 2491 | 2.542 | 2479 | -2197 | 282   |
| 38.2               | BREWSTER                    | NZ      | 2007 | COM | 2400     | 2480 | 0.002 | 4357 | -500  | 3892  |
|                    |                             |         |      |     | 2300     | 2400 | 0.065 | 4102 | -506  | 3596  |
|                    |                             |         |      |     | 2200     | 2300 | 0.146 | 3815 | -1285 | 2530  |
|                    |                             |         |      |     | 2100     | 2200 | 0.189 | 3514 | -1743 | 1771  |
|                    |                             |         |      |     | 2000     | 2100 | 0.246 | 3160 | -1673 | 1486  |
|                    |                             |         |      |     | 1900     | 2000 | 1.043 | 2873 | -2382 | 491   |
|                    |                             |         |      |     | 1800     | 1900 | 0.587 | 2566 | -3033 | -467  |
|                    |                             |         |      |     | 1700     | 1800 | 0.238 | 2124 | -4943 | -2819 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS   | ALTITUDE      |             | AREA    | BW   | BS    | BA    |      |      |      |       |       |
|------|--------------|---------|------|-------|---------------|-------------|---------|------|-------|-------|------|------|------|-------|-------|
|      |              |         |      |       | FROM          | TO          | KM²     | MM   | MM    | MM    |      |      |      |       |       |
| 38.3 | BREWSTER     | NZ      | 2008 | COM   | 1657          | 1700        | 0.027   | 1670 | -6250 | -4580 |      |      |      |       |       |
|      |              |         |      |       | 1657          | 2480        | 2.542   | 2881 | -2583 | 297   |      |      |      |       |       |
|      |              |         |      |       | 2400          | 2480        | 0.003   | 3250 | -3776 | -526  |      |      |      |       |       |
|      |              |         |      |       | 2300          | 2400        | 0.066   | 3329 | -3456 | -127  |      |      |      |       |       |
|      |              |         |      |       | 2200          | 2300        | 0.147   | 3179 | -3671 | -492  |      |      |      |       |       |
|      |              |         |      |       | 2100          | 2200        | 0.19    | 2509 | -3098 | -589  |      |      |      |       |       |
|      |              |         |      |       | 2000          | 2100        | 0.249   | 2772 | -3378 | -606  |      |      |      |       |       |
|      |              |         |      |       | 1900          | 2000        | 1.044   | 2583 | -3776 | -1193 |      |      |      |       |       |
|      |              |         |      |       | 1800          | 1900        | 0.581   | 2239 | -4795 | -2556 |      |      |      |       |       |
|      |              |         |      |       | 1700          | 1800        | 0.234   | 1439 | -5728 | -4289 |      |      |      |       |       |
|      |              |         |      |       | 1657          | 1700        | 0.027   | 750  | -5250 | -4500 |      |      |      |       |       |
|      |              |         |      |       | 1657          | 2480        | 2.541   | 2447 | -4100 | -1653 |      |      |      |       |       |
| 38.4 | BREWSTER     | NZ      | 2009 | COM   | 2400          | 2480        | 0.003   | 2375 | -1362 | 1013  |      |      |      |       |       |
|      |              |         |      |       | 2300          | 2400        | 0.066   | 2375 | -1661 | 714   |      |      |      |       |       |
|      |              |         |      |       | 2200          | 2300        | 0.147   | 2287 | -1785 | 502   |      |      |      |       |       |
|      |              |         |      |       | 2100          | 2200        | 0.19    | 2151 | -1931 | 219   |      |      |      |       |       |
|      |              |         |      |       | 2000          | 2100        | 0.249   | 2185 | -2039 | 146   |      |      |      |       |       |
|      |              |         |      |       | 1900          | 2000        | 1.044   | 2063 | -2810 | -746  |      |      |      |       |       |
|      |              |         |      |       | 1800          | 1900        | 0.581   | 1737 | -3134 | -1397 |      |      |      |       |       |
|      |              |         |      |       | 1700          | 1800        | 0.234   | 995  | -3601 | -2606 |      |      |      |       |       |
|      |              |         |      |       | 1657          | 1700        | 0.027   | 511  | -4373 | -3863 |      |      |      |       |       |
|      |              |         |      |       | 1657          | 2480        | 2.541   | 1914 | -2741 | -828  |      |      |      |       |       |
|      |              |         |      |       | <u>NORWAY</u> |             |         |      |       |       |      |      |      |       |       |
|      |              |         |      |       | 39.1          | AALFOTBREEN | NO36204 | 2006 |       | 1350  | 1382 | 0.23 | 2700 | -5150 | -2450 |
| 1300 | 1350         | 0.98    | 2800 | -5300 |               |             |         |      |       | -2500 |      |      |      |       |       |
| 1250 | 1300         | 0.8     | 2750 | -5500 |               |             |         |      |       | -2750 |      |      |      |       |       |
| 1200 | 1250         | 0.73    | 2700 | -5750 |               |             |         |      |       | -3050 |      |      |      |       |       |
| 1150 | 1200         | 0.61    | 2600 | -6050 |               |             |         |      |       | -3450 |      |      |      |       |       |
| 1100 | 1150         | 0.49    | 2550 | -6400 |               |             |         |      |       | -3850 |      |      |      |       |       |
| 1050 | 1100         | 0.32    | 2600 | -6800 |               |             |         |      |       | -4200 |      |      |      |       |       |
| 1000 | 1050         | 0.2     | 2650 | -7150 |               |             |         |      |       | -4500 |      |      |      |       |       |
| 950  | 1000         | 0.11    | 2700 | -7500 |               |             |         |      |       | -4800 |      |      |      |       |       |
| 903  | 950          | 0.03    | 2800 | -7850 |               |             |         |      |       | -5050 |      |      |      |       |       |
| 903  | 1382         | 4.5     | 2690 | -5880 |               |             |         |      |       | -3190 |      |      |      |       |       |
| 39.2 | AALFOTBREEN  | NO36204 | 2007 |       |               |             |         |      |       | 1350  | 1382 | 0.23 | 4550 | -2750 | 1800  |
|      |              |         |      |       | 1300          | 1350        | 0.98    | 4650 | -2750 | 1900  |      |      |      |       |       |
|      |              |         |      |       | 1250          | 1300        | 0.8     | 4650 | -3000 | 1650  |      |      |      |       |       |
|      |              |         |      |       | 1200          | 1250        | 0.73    | 4600 | -3130 | 1470  |      |      |      |       |       |
|      |              |         |      |       | 1150          | 1200        | 0.61    | 4450 | -3350 | 1100  |      |      |      |       |       |
|      |              |         |      |       | 1100          | 1150        | 0.49    | 4300 | -3550 | 750   |      |      |      |       |       |
|      |              |         |      |       | 1050          | 1100        | 0.32    | 4150 | -3750 | 400   |      |      |      |       |       |
|      |              |         |      |       | 1000          | 1050        | 0.2     | 4050 | -3930 | 120   |      |      |      |       |       |
|      |              |         |      |       | 950           | 1000        | 0.11    | 4000 | -4130 | -130  |      |      |      |       |       |
|      |              |         |      |       | 903           | 950         | 0.03    | 3950 | -4350 | -400  |      |      |      |       |       |
|      |              |         |      |       | 903           | 1382        | 4.5     | 4490 | -3220 | 1270  |      |      |      |       |       |
|      |              |         |      |       | 39.3          | AALFOTBREEN | NO36204 | 2008 |       | 1350  | 1382 | 0.23 | 4150 | -2350 | 1800  |
| 1300 | 1350         | 0.98    | 4130 | -2600 |               |             |         |      |       | 1530  |      |      |      |       |       |
| 1250 | 1300         | 0.8     | 4100 | -2900 |               |             |         |      |       | 1200  |      |      |      |       |       |
| 1200 | 1250         | 0.73    | 4080 | -3250 |               |             |         |      |       | 830   |      |      |      |       |       |
| 1150 | 1200         | 0.61    | 4050 | -3650 |               |             |         |      |       | 400   |      |      |      |       |       |
| 1100 | 1150         | 0.49    | 4000 | -4050 |               |             |         |      |       | -50   |      |      |      |       |       |
| 1050 | 1100         | 0.32    | 3800 | -4400 |               |             |         |      |       | -600  |      |      |      |       |       |
| 1000 | 1050         | 0.2     | 3700 | -4800 |               |             |         |      |       | -1100 |      |      |      |       |       |
| 950  | 1000         | 0.11    | 3750 | -5150 |               |             |         |      |       | -1400 |      |      |      |       |       |
| 903  | 950          | 0.03    | 3850 | -5500 |               |             |         |      |       | -1650 |      |      |      |       |       |
| 903  | 1382         | 4.5     | 4040 | -3350 |               |             |         |      |       | 680   |      |      |      |       |       |



| NR   | GLACIER NAME  | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|---------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |               |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 39.4 | AALFOTBREEN   | NO36204 | 2009 |     | 1350     | 1382 | 0.23  | 4100 | -3480 | 630   |
|      |               |         |      |     | 1300     | 1350 | 0.98  | 4050 | -3600 | 450   |
|      |               |         |      |     | 1250     | 1300 | 0.8   | 3950 | -3750 | 200   |
|      |               |         |      |     | 1200     | 1250 | 0.73  | 3850 | -3950 | -100  |
|      |               |         |      |     | 1150     | 1200 | 0.61  | 3750 | -4130 | -380  |
|      |               |         |      |     | 1100     | 1150 | 0.49  | 3650 | -4350 | -700  |
|      |               |         |      |     | 1050     | 1100 | 0.32  | 3550 | -4580 | -1030 |
|      |               |         |      |     | 1000     | 1050 | 0.2   | 3450 | -4850 | -1400 |
|      |               |         |      |     | 950      | 1000 | 0.11  | 3400 | -5100 | -1700 |
|      |               |         |      |     | 903      | 950  | 0.03  | 3400 | -5350 | -1950 |
|      |               |         |      |     | 903      | 1382 | 4.5   | 3840 | -4000 | -160  |
| 39.5 | AALFOTBREEN   | NO36204 | 2010 |     | 1300     | 1368 | 0.9   | 2330 | -3530 | -1200 |
|      |               |         |      |     | 1250     | 1300 | 0.78  | 2280 | -3800 | -1530 |
|      |               |         |      |     | 1200     | 1250 | 0.7   | 2200 | -4000 | -1800 |
|      |               |         |      |     | 1150     | 1200 | 0.58  | 2130 | -4200 | -2080 |
|      |               |         |      |     | 1100     | 1150 | 0.45  | 2130 | -4400 | -2280 |
|      |               |         |      |     | 1050     | 1100 | 0.3   | 2050 | -4600 | -2550 |
|      |               |         |      |     | 1000     | 1050 | 0.18  | 1880 | -4800 | -2930 |
|      |               |         |      |     | 950      | 1000 | 0.07  | 1730 | -4980 | -3250 |
|      |               |         |      |     | 890      | 950  | 0.01  | 1600 | -5200 | -3600 |
|      |               |         |      |     | 890      | 1368 | 3.98  | 2190 | -4030 | -1840 |
|      |               |         |      |     |          |      |       |      |       |       |
| 40.1 | AUSTDALSBREEN | NO37323 | 2006 |     | 1700     | 1757 | 0.16  | 1600 | -3050 | -1450 |
|      |               |         |      |     | 1650     | 1700 | 0.13  | 1650 | -2950 | -1300 |
|      |               |         |      |     | 1600     | 1650 | 0.38  | 1600 | -2900 | -1300 |
|      |               |         |      |     | 1550     | 1600 | 2.45  | 1550 | -2850 | -1300 |
|      |               |         |      |     | 1500     | 1550 | 2.54  | 1500 | -2800 | -1300 |
|      |               |         |      |     | 1450     | 1500 | 1.92  | 1400 | -2950 | -1550 |
|      |               |         |      |     | 1400     | 1450 | 1.36  | 1300 | -3450 | -2150 |
|      |               |         |      |     | 1350     | 1400 | 1.01  | 1110 | -3900 | -2790 |
|      |               |         |      |     | 1300     | 1350 | 0.79  | 950  | -4200 | -3250 |
|      |               |         |      |     | 1250     | 1300 | 0.69  | 700  | -4650 | -3950 |
|      |               |         |      |     | 1200     | 1250 | 0.44  | 500  | -5100 | -4600 |
| 40.2 | AUSTDALSBREEN | NO37323 | 2007 |     | 1200     | 1757 | 11.84 | 1320 | -3380 | -2060 |
|      |               |         |      |     |          |      |       |      |       |       |
|      |               |         |      |     | 1700     | 1757 | 0.16  | 1900 | -1500 | 400   |
|      |               |         |      |     | 1650     | 1700 | 0.13  | 2500 | -1550 | 950   |
|      |               |         |      |     | 1600     | 1650 | 0.38  | 2900 | -1600 | 1300  |
|      |               |         |      |     | 1550     | 1600 | 2.45  | 3000 | -1700 | 1300  |
|      |               |         |      |     | 1500     | 1550 | 2.54  | 3000 | -1800 | 1200  |
|      |               |         |      |     | 1450     | 1500 | 1.92  | 2600 | -1900 | 700   |
|      |               |         |      |     | 1400     | 1450 | 1.36  | 2200 | -2000 | 200   |
|      |               |         |      |     | 1350     | 1400 | 1.01  | 1850 | -2200 | -350  |
|      |               |         |      |     | 1300     | 1350 | 0.79  | 1600 | -2500 | -900  |
| 40.3 | AUSTDALSBREEN | NO37323 | 2008 |     | 1250     | 1300 | 0.69  | 1300 | -2900 | -1600 |
|      |               |         |      |     | 1200     | 1250 | 0.44  | 1000 | -3800 | -2800 |
|      |               |         |      |     | 1200     | 1757 | 11.84 | 2460 | -2280 | 180   |
|      |               |         |      |     |          |      |       |      |       |       |
|      |               |         |      |     | 1700     | 1757 | 0.16  | 2300 | -1500 | 800   |
|      |               |         |      |     | 1650     | 1700 | 0.13  | 3000 | -1500 | 1500  |
|      |               |         |      |     | 1600     | 1650 | 0.38  | 3100 | -1600 | 1500  |
|      |               |         |      |     | 1550     | 1600 | 2.45  | 3050 | -1700 | 1350  |
|      |               |         |      |     | 1500     | 1550 | 2.54  | 2950 | -1900 | 1050  |
|      |               |         |      |     | 1450     | 1500 | 1.92  | 2700 | -2100 | 600   |
|      |               |         |      |     | 1400     | 1450 | 1.36  | 2400 | -2300 | 100   |
| 40.3 | AUSTDALSBREEN | NO37323 | 2008 |     | 1350     | 1400 | 1.01  | 2100 | -2750 | -650  |
|      |               |         |      |     | 1300     | 1350 | 0.79  | 1800 | -3350 | -1550 |
|      |               |         |      |     | 1250     | 1300 | 0.69  | 1300 | -4000 | -2700 |
|      |               |         |      |     | 1200     | 1250 | 0.44  | 1000 | -4700 | -3700 |
|      |               |         |      |     | 1200     | 1757 | 11.84 | 2550 | -2620 | -70   |
|      |               |         |      |     |          |      |       |      |       |       |
|      |               |         |      |     |          |      |       |      |       |       |
|      |               |         |      |     |          |      |       |      |       |       |
|      |               |         |      |     |          |      |       |      |       |       |
|      |               |         |      |     |          |      |       |      |       |       |
|      |               |         |      |     |          |      |       |      |       |       |

| NR   | GLACIER NAME         | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|----------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                      |         |      |     | FROM     | TO   |       |      |       |       |
|      |                      |         |      |     |          |      | KM²   | MM   | MM    | MM    |
| 40.4 | AUSTDALSBREEN        | NO37323 | 2009 |     | 1700     | 1747 | 0.14  | 1500 | -1800 | -300  |
|      |                      |         |      |     | 1650     | 1700 | 0.13  | 1900 | -1830 | 70    |
|      |                      |         |      |     | 1600     | 1650 | 0.2   | 2000 | -1850 | 150   |
|      |                      |         |      |     | 1550     | 1600 | 2.31  | 2100 | -1870 | 230   |
|      |                      |         |      |     | 1500     | 1550 | 2.37  | 2200 | -1900 | 300   |
|      |                      |         |      |     | 1450     | 1500 | 1.69  | 2000 | -2000 | 0     |
|      |                      |         |      |     | 1400     | 1450 | 1.38  | 1950 | -2400 | -450  |
|      |                      |         |      |     | 1350     | 1400 | 0.94  | 1400 | -2800 | -1400 |
|      |                      |         |      |     | 1300     | 1350 | 0.73  | 1600 | -3250 | -1650 |
|      |                      |         |      |     | 1250     | 1300 | 0.55  | 1300 | -3900 | -2600 |
|      |                      |         |      |     | 1200     | 1250 | 0.2   | 1000 | -4750 | -3750 |
|      |                      |         |      |     | 1200     | 1747 | 10.63 | 1920 | -2620 | -700  |
|      |                      |         |      |     |          |      |       |      |       |       |
| 40.5 | AUSTDALSBREEN        | NO37323 | 2010 |     | 1700     | 1747 | 0.14  | 1000 | -2100 | -1100 |
|      |                      |         |      |     | 1650     | 1700 | 0.13  | 1100 | -2150 | -1050 |
|      |                      |         |      |     | 1600     | 1650 | 0.2   | 1350 | -2170 | -820  |
|      |                      |         |      |     | 1550     | 1600 | 2.31  | 1300 | -2200 | -900  |
|      |                      |         |      |     | 1500     | 1550 | 2.37  | 1200 | -2250 | -1050 |
|      |                      |         |      |     | 1450     | 1500 | 1.69  | 1100 | -2600 | -1500 |
|      |                      |         |      |     | 1400     | 1450 | 1.38  | 950  | -3200 | -2250 |
|      |                      |         |      |     | 1350     | 1400 | 0.94  | 650  | -3550 | -2900 |
|      |                      |         |      |     | 1300     | 1350 | 0.73  | 550  | -3850 | -3300 |
|      |                      |         |      |     | 1250     | 1300 | 0.55  | 500  | -4150 | -3650 |
|      |                      |         |      |     | 1200     | 1250 | 0.2   | 450  | -4500 | -4050 |
|      |                      |         |      |     | 1200     | 1747 | 10.63 | 1030 | -3030 | -2000 |
|      |                      |         |      |     |          |      |       |      |       |       |
| 41.1 | AUSTRE BROEGGERBREEN | NO15504 | 2006 | COM | 550      | 600  | 0.12  | 1028 | -421  | 607   |
|      |                      |         |      |     | 500      | 550  | 0.25  | 950  | -597  | 353   |
|      |                      |         |      |     | 450      | 500  | 0.46  | 872  | -773  | 98    |
|      |                      |         |      |     | 400      | 450  | 0.56  | 794  | -950  | -156  |
|      |                      |         |      |     | 350      | 400  | 0.79  | 716  | -1126 | -410  |
|      |                      |         |      |     | 300      | 350  | 1.02  | 638  | -1302 | -664  |
|      |                      |         |      |     | 250      | 300  | 0.92  | 560  | -1478 | -919  |
|      |                      |         |      |     | 200      | 250  | 0.95  | 482  | -1654 | -1173 |
|      |                      |         |      |     | 150      | 200  | 0.71  | 404  | -1831 | -1427 |
|      |                      |         |      |     | 100      | 150  | 0.31  | 325  | -2007 | -1681 |
|      |                      |         |      |     | 50       | 100  | 0.03  | 247  | -2183 | -1936 |
|      |                      |         |      |     | 50       | 600  | 6.12  | 619  | -1344 | -725  |
|      |                      |         |      |     |          |      |       |      |       |       |
| 41.2 | AUSTRE BROEGGERBREEN | NO15504 | 2007 | COM | 550      | 600  | 0.12  | 811  | -212  | 599   |
|      |                      |         |      |     | 500      | 550  | 0.25  | 775  | -378  | 397   |
|      |                      |         |      |     | 450      | 500  | 0.46  | 739  | -543  | 196   |
|      |                      |         |      |     | 400      | 450  | 0.56  | 702  | -708  | -6    |
|      |                      |         |      |     | 350      | 400  | 0.79  | 666  | -873  | -207  |
|      |                      |         |      |     | 300      | 350  | 1.02  | 630  | -1038 | -409  |
|      |                      |         |      |     | 250      | 300  | 0.92  | 593  | -1204 | -610  |
|      |                      |         |      |     | 200      | 250  | 0.95  | 557  | -1369 | -812  |
|      |                      |         |      |     | 150      | 200  | 0.71  | 521  | -1534 | -1014 |
|      |                      |         |      |     | 100      | 150  | 0.31  | 484  | -1699 | -1215 |
|      |                      |         |      |     | 50       | 100  | 0.03  | 448  | -1865 | -1417 |
|      |                      |         |      |     | 50       | 600  | 6.12  | 621  | -1078 | -457  |
|      |                      |         |      |     |          |      |       |      |       |       |
| 41.3 | AUSTRE BROEGGERBREEN | NO15504 | 2008 | COM | 550      | 600  | 0.12  | 996  | 199   | 1195  |
|      |                      |         |      |     | 500      | 550  | 0.25  | 943  | 0     | 943   |
|      |                      |         |      |     | 450      | 500  | 0.46  | 890  | -200  | 690   |
|      |                      |         |      |     | 400      | 450  | 0.56  | 837  | -399  | 438   |
|      |                      |         |      |     | 350      | 400  | 0.79  | 784  | -599  | 185   |
|      |                      |         |      |     | 300      | 350  | 1.02  | 731  | -798  | -67   |
|      |                      |         |      |     | 250      | 300  | 0.92  | 678  | -998  | -320  |
|      |                      |         |      |     | 200      | 250  | 0.95  | 625  | -1197 | -572  |
|      |                      |         |      |     | 150      | 200  | 0.71  | 572  | -1397 | -825  |

| NR   | GLACIER NAME         | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|----------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                      |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 41.4 | AUSTRE BROEGGERBREEN | NO15504 | 2009 | COM | 100      | 150  | 0.31  | 519  | -1596 | -1077 |
|      |                      |         |      |     | 50       | 100  | 0.03  | 466  | -1796 | -1329 |
|      |                      |         |      |     | 50       | 600  | 6.12  | 719  | -846  | -127  |
|      |                      |         |      |     | 550      | 600  | 0.12  | 923  | -279  | 643   |
|      |                      |         |      |     | 500      | 550  | 0.25  | 885  | -411  | 473   |
|      |                      |         |      |     | 450      | 500  | 0.46  | 847  | -544  | 304   |
|      |                      |         |      |     | 400      | 450  | 0.56  | 809  | -676  | 134   |
|      |                      |         |      |     | 350      | 400  | 0.79  | 772  | -808  | -36   |
|      |                      |         |      |     | 300      | 350  | 1.02  | 734  | -940  | -206  |
|      |                      |         |      |     | 250      | 300  | 0.92  | 696  | -1072 | -376  |
|      |                      |         |      |     | 200      | 250  | 0.95  | 658  | -1204 | -546  |
|      |                      |         |      |     | 150      | 200  | 0.71  | 621  | -1336 | -715  |
|      |                      |         |      |     | 100      | 150  | 0.31  | 583  | -1468 | -885  |
|      |                      |         |      |     | 50       | 100  | 0.03  | 545  | -1600 | -1055 |
|      |                      |         |      |     | 50       | 600  | 0     |      |       | -250  |
| 42.1 | BLOMSTOELSKARDSBREEN | NO      | 2007 |     | 1600     | 1636 | 1.35  | 4850 | -1600 | 3250  |
|      |                      |         |      |     | 1550     | 1600 | 6.49  | 4650 | -1750 | 2900  |
|      |                      |         |      |     | 1500     | 1550 | 4.04  | 4450 | -1950 | 2500  |
|      |                      |         |      |     | 1450     | 1500 | 2.11  | 4250 | -2150 | 2100  |
|      |                      |         |      |     | 1400     | 1450 | 1.56  | 4100 | -2400 | 1700  |
|      |                      |         |      |     | 1350     | 1400 | 1.92  | 3900 | -2600 | 1300  |
|      |                      |         |      |     | 1300     | 1350 | 1.37  | 3700 | -2850 | 850   |
|      |                      |         |      |     | 1250     | 1300 | 0.81  | 3500 | -3100 | 400   |
|      |                      |         |      |     | 1200     | 1250 | 1.31  | 3330 | -3350 | -20   |
|      |                      |         |      |     | 1150     | 1200 | 1.02  | 3050 | -3600 | -550  |
|      |                      |         |      |     | 1100     | 1150 | 0.45  | 2800 | -3900 | -1100 |
|      |                      |         |      |     | 1013     | 1100 | 0.33  | 2550 | -4150 | -1600 |
|      |                      |         |      |     | 1013     | 1636 | 22.8  | 4170 | -2300 | 1880  |
| 42.2 | BLOMSTOELSKARDSBREEN | NO      | 2008 |     | 1600     | 1636 | 1.35  | 3900 | -1450 | 2450  |
|      |                      |         |      |     | 1550     | 1600 | 6.49  | 3800 | -1650 | 2150  |
|      |                      |         |      |     | 1500     | 1550 | 4.04  | 3650 | -1850 | 1800  |
|      |                      |         |      |     | 1450     | 1500 | 2.11  | 3500 | -2050 | 1450  |
|      |                      |         |      |     | 1400     | 1450 | 1.56  | 3300 | -2250 | 1050  |
|      |                      |         |      |     | 1350     | 1400 | 1.92  | 3150 | -2450 | 700   |
|      |                      |         |      |     | 1300     | 1350 | 1.37  | 3000 | -2650 | 350   |
|      |                      |         |      |     | 1250     | 1300 | 0.81  | 2900 | -2850 | 50    |
|      |                      |         |      |     | 1200     | 1250 | 1.31  | 2800 | -3050 | -250  |
|      |                      |         |      |     | 1150     | 1200 | 1.02  | 2750 | -3250 | -500  |
|      |                      |         |      |     | 1100     | 1150 | 0.45  | 2700 | -3450 | -750  |
|      |                      |         |      |     | 1013     | 1100 | 0.33  | 2650 | -3750 | -1100 |
|      |                      |         |      |     | 1013     | 1636 | 22.45 | 3440 | -2140 | 1300  |
| 42.3 | BLOMSTOELSKARDSBREEN | NO      | 2009 |     | 1600     | 1650 | 1.35  | 4050 | -1900 | 2150  |
|      |                      |         |      |     | 1550     | 1600 | 6.49  | 3900 | -2000 | 1900  |
|      |                      |         |      |     | 1500     | 1550 | 4.04  | 3780 | -2150 | 1630  |
|      |                      |         |      |     | 1450     | 1500 | 2.11  | 3650 | -2350 | 1300  |
|      |                      |         |      |     | 1400     | 1450 | 1.56  | 3550 | -2600 | 950   |
|      |                      |         |      |     | 1350     | 1400 | 1.92  | 3450 | -2850 | 600   |
|      |                      |         |      |     | 1300     | 1350 | 1.37  | 3350 | -3100 | 250   |
|      |                      |         |      |     | 1250     | 1300 | 0.81  | 3200 | -3330 | -130  |
|      |                      |         |      |     | 1200     | 1250 | 1.31  | 3000 | -3550 | -550  |
|      |                      |         |      |     | 1150     | 1200 | 1.02  | 2750 | -3780 | -1030 |
|      |                      |         |      |     | 1100     | 1150 | 0.45  | 2500 | -4000 | -1500 |
|      |                      |         |      |     | 1013     | 1100 | 0.33  | 2300 | -4300 | -2000 |
|      |                      |         |      |     | 1013     | 1650 | 22.77 | 3590 | -2520 | 1070  |
| 42.4 | BLOMSTOELSKARDSBREEN | NO      | 2010 |     | 1600     | 1636 | 1.35  | 2130 | -2500 | -370  |
|      |                      |         |      |     | 1550     | 1600 | 6.49  | 2080 | -2600 | -520  |

| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA | BW   | BS    | BA    |
|------|-----------------|---------|------|-----|----------|------|------|------|-------|-------|
|      |                 |         |      |     | FROM     | TO   | KM²  | MM   | MM    | MM    |
|      |                 |         |      |     | 1500     | 1550 | 4.04 | 2030 | -2750 | -720  |
|      |                 |         |      |     | 1450     | 1500 | 2.11 | 1950 | -2900 | -950  |
|      |                 |         |      |     | 1400     | 1450 | 1.56 | 1880 | -3080 | -1200 |
|      |                 |         |      |     | 1350     | 1400 | 1.92 | 1750 | -3280 | -1530 |
|      |                 |         |      |     | 1300     | 1350 | 1.37 | 1580 | -3530 | -1950 |
|      |                 |         |      |     | 1250     | 1300 | 0.81 | 1450 | -3800 | -2350 |
|      |                 |         |      |     | 1200     | 1250 | 1.31 | 1350 | -4050 | -2700 |
|      |                 |         |      |     | 1150     | 1200 | 1.02 | 1250 | -4330 | -3080 |
|      |                 |         |      |     | 1100     | 1150 | 0.45 | 1100 | -4630 | -3530 |
|      |                 |         |      |     | 1013     | 1100 | 0.33 | 800  | -5050 | -4250 |
|      |                 |         |      |     | 1013     | 1636 | 22.8 | 1850 | -3070 | -1230 |
| 43.1 | BREIDABLIKKBREA | NO      | 2006 |     | 1600     | 1659 | 0.66 | 1650 | -3800 | -2150 |
|      |                 |         |      |     | 1550     | 1600 | 0.61 | 1500 | -3950 | -2450 |
|      |                 |         |      |     | 1500     | 1550 | 0.45 | 1450 | -4150 | -2700 |
|      |                 |         |      |     | 1450     | 1500 | 0.43 | 1400 | -4400 | -3000 |
|      |                 |         |      |     | 1400     | 1450 | 0.39 | 1400 | -4650 | -3250 |
|      |                 |         |      |     | 1350     | 1400 | 0.36 | 1400 | -4900 | -3500 |
|      |                 |         |      |     | 1300     | 1350 | 0.4  | 1450 | -5150 | -3700 |
|      |                 |         |      |     | 1236     | 1300 | 0.31 | 1550 | -5400 | -3850 |
|      |                 |         |      |     | 1236     | 1659 | 3.61 | 1490 | -4440 | -2950 |
| 43.2 | BREIDABLIKKBREA | NO      | 2007 |     | 1600     | 1651 | 0.63 | 3750 | -2250 | 1500  |
|      |                 |         |      |     | 1550     | 1600 | 0.58 | 3600 | -2550 | 1050  |
|      |                 |         |      |     | 1500     | 1550 | 0.43 | 3500 | -2800 | 700   |
|      |                 |         |      |     | 1450     | 1500 | 0.38 | 3450 | -3050 | 400   |
|      |                 |         |      |     | 1400     | 1450 | 0.28 | 3400 | -3300 | 100   |
|      |                 |         |      |     | 1350     | 1400 | 0.36 | 3250 | -3550 | -300  |
|      |                 |         |      |     | 1300     | 1350 | 0.34 | 3050 | -3850 | -800  |
|      |                 |         |      |     | 1234     | 1300 | 0.38 | 3000 | -4200 | -1200 |
|      |                 |         |      |     | 1234     | 1651 | 3.6  | 3420 | -3070 | 360   |
| 43.3 | BREIDABLIKKBREA | NO      | 2008 |     | 1600     | 1651 | 0.63 | 2650 | -2000 | 650   |
|      |                 |         |      |     | 1550     | 1600 | 0.58 | 2700 | -2300 | 400   |
|      |                 |         |      |     | 1500     | 1550 | 0.43 | 2750 | -2700 | 50    |
|      |                 |         |      |     | 1450     | 1500 | 0.38 | 2800 | -3050 | -250  |
|      |                 |         |      |     | 1400     | 1450 | 0.28 | 2750 | -3350 | -600  |
|      |                 |         |      |     | 1350     | 1400 | 0.36 | 2650 | -3600 | -950  |
|      |                 |         |      |     | 1300     | 1350 | 0.34 | 2550 | -3850 | -1300 |
|      |                 |         |      |     | 1234     | 1300 | 0.38 | 2450 | -4100 | -1650 |
|      |                 |         |      |     | 1234     | 1651 | 3.37 | 2660 | -2960 | -300  |
| 43.4 | BREIDABLIKKBREA | NO      | 2009 |     | 1600     | 1650 | 0.63 | 2600 | -2380 | 220   |
|      |                 |         |      |     | 1550     | 1600 | 0.58 | 2550 | -2500 | 50    |
|      |                 |         |      |     | 1500     | 1550 | 0.43 | 2450 | -2680 | -230  |
|      |                 |         |      |     | 1450     | 1500 | 0.38 | 2350 | -2880 | -530  |
|      |                 |         |      |     | 1400     | 1450 | 0.28 | 2300 | -3100 | -800  |
|      |                 |         |      |     | 1350     | 1400 | 0.36 | 2400 | -3380 | -980  |
|      |                 |         |      |     | 1300     | 1350 | 0.34 | 2500 | -3700 | -1200 |
|      |                 |         |      |     | 1234     | 1300 | 0.38 | 2400 | -4100 | -1700 |
|      |                 |         |      |     | 1234     | 1650 | 3.37 | 2470 | -2980 | -520  |
| 43.5 | BREIDABLIKKBREA | NO      | 2010 |     | 1600     | 1651 | 0.63 | 1700 | -3280 | -1580 |
|      |                 |         |      |     | 1550     | 1600 | 0.58 | 1630 | -3330 | -1700 |
|      |                 |         |      |     | 1500     | 1550 | 0.43 | 1530 | -3430 | -1900 |
|      |                 |         |      |     | 1450     | 1500 | 0.38 | 1500 | -3530 | -2030 |
|      |                 |         |      |     | 1400     | 1450 | 0.28 | 1530 | -3630 | -2100 |
|      |                 |         |      |     | 1350     | 1400 | 0.36 | 1580 | -3700 | -2120 |
|      |                 |         |      |     | 1300     | 1350 | 0.34 | 1630 | -3800 | -2170 |
|      |                 |         |      |     | 1234     | 1300 | 0.38 | 1600 | -3950 | -2350 |
|      |                 |         |      |     | 1234     | 1651 | 3.37 | 1600 | -3530 | -1940 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW    | BS    | BA     |
|------|--------------|---------|------|-----|----------|------|-------|-------|-------|--------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM    | MM    | MM     |
| 44.1 | ENGABREEN    | NO67011 | 2006 |     | 1500     | 1575 | 0.13  | 2200  | -1900 | 300    |
|      |              |         |      |     | 1400     | 1500 | 2.94  | 2500  | -2000 | 500    |
|      |              |         |      |     | 1300     | 1400 | 10.52 | 2450  | -2300 | 150    |
|      |              |         |      |     | 1200     | 1300 | 8.68  | 2200  | -2700 | -500   |
|      |              |         |      |     | 1100     | 1200 | 7.47  | 1650  | -3200 | -1550  |
|      |              |         |      |     | 1000     | 1100 | 4.52  | 1300  | -3600 | -2300  |
|      |              |         |      |     | 900      | 1000 | 2.38  | 500   | -4700 | -4200  |
|      |              |         |      |     | 800      | 900  | 0.87  | 0     | -5550 | -5550  |
|      |              |         |      |     | 700      | 800  | 0.54  | -500  | -6000 | -6500  |
|      |              |         |      |     | 600      | 700  | 0.38  | -1000 | -6550 | -7550  |
|      |              |         |      |     | 500      | 600  | 0.28  | 1500  | -7100 | -5600  |
|      |              |         |      |     | 400      | 500  | 0.2   | -2000 | -7650 | -9650  |
|      |              |         |      |     | 300      | 400  | 0.17  | -2500 | -8200 | -10700 |
|      |              |         |      |     | 200      | 300  | 0.26  | -3100 | -8800 | -11900 |
|      |              |         |      |     | 10       | 200  | 0.21  | -3700 | -9800 | -13500 |
|      |              |         |      |     | 10       | 1575 | 39.6  | 1720  | -3160 | -1430  |
| 44.2 | ENGABREEN    | NO67011 | 2007 |     | 1500     | 1575 | 0.13  | 4000  | -1500 | 2500   |
|      |              |         |      |     | 1400     | 1500 | 2.94  | 4200  | -1600 | 2600   |
|      |              |         |      |     | 1300     | 1400 | 10.52 | 4300  | -1750 | 2550   |
|      |              |         |      |     | 1200     | 1300 | 8.68  | 3800  | -2050 | 1750   |
|      |              |         |      |     | 1100     | 1200 | 7.47  | 3200  | -2350 | 850    |
|      |              |         |      |     | 1000     | 1100 | 4.52  | 2800  | -2650 | 150    |
|      |              |         |      |     | 900      | 1000 | 2.38  | 2000  | -2900 | -900   |
|      |              |         |      |     | 800      | 900  | 0.87  | 1500  | -3500 | -2000  |
|      |              |         |      |     | 700      | 800  | 0.54  | 1000  | -4100 | -3100  |
|      |              |         |      |     | 600      | 700  | 0.38  | 500   | -4800 | -4300  |
|      |              |         |      |     | 500      | 600  | 0.28  | 0     | -5500 | -5500  |
|      |              |         |      |     | 400      | 500  | 0.2   | -500  | -6200 | -6700  |
|      |              |         |      |     | 300      | 400  | 0.17  | -1000 | -6900 | -7900  |
|      |              |         |      |     | 200      | 300  | 0.26  | -1500 | -7700 | -9200  |
|      |              |         |      |     | 10       | 200  | 0.21  | -2000 | -8800 | -10800 |
|      |              |         |      |     | 10       | 1575 | 39.6  | 3400  | -2300 | 1110   |
| 44.3 | ENGABREEN    | NO67011 | 2008 |     | 1500     | 1574 | 0.1   | 3000  | -1600 | 1400   |
|      |              |         |      |     | 1400     | 1500 | 2.65  | 3400  | -1700 | 1700   |
|      |              |         |      |     | 1300     | 1400 | 10.49 | 3200  | -1900 | 1300   |
|      |              |         |      |     | 1200     | 1300 | 8.46  | 3200  | -2100 | 1100   |
|      |              |         |      |     | 1100     | 1200 | 7.56  | 2800  | -2400 | 400    |
|      |              |         |      |     | 1000     | 1100 | 4.57  | 2500  | -2800 | -300   |
|      |              |         |      |     | 900      | 1000 | 2.38  | 1900  | -3800 | -1900  |
|      |              |         |      |     | 800      | 900  | 0.84  | 1500  | -4500 | -3000  |
|      |              |         |      |     | 700      | 800  | 0.51  | 1100  | -5150 | -4050  |
|      |              |         |      |     | 600      | 700  | 0.35  | 700   | -5800 | -5100  |
|      |              |         |      |     | 500      | 600  | 0.26  | 300   | -6450 | -6150  |
|      |              |         |      |     | 400      | 500  | 0.17  | -100  | -7100 | -7200  |
|      |              |         |      |     | 300      | 400  | 0.13  | -500  | -7750 | -8250  |
|      |              |         |      |     | 200      | 300  | 0.18  | -900  | -8400 | -9300  |
|      |              |         |      |     | 100      | 200  | 0.09  | -1300 | -9050 | -10350 |
|      |              |         |      |     | 89       | 100  | 0     | -1600 | -9500 | -11100 |
|      |              |         |      |     | 89       | 1574 | 38.74 | 2810  | -2500 | 310    |
| 44.4 | ENGABREEN    | NO67011 | 2009 |     | 1500     | 1574 | 0.1   | 3000  | -1850 | 1150   |
|      |              |         |      |     | 1400     | 1500 | 2.65  | 3500  | -2000 | 1500   |
|      |              |         |      |     | 1300     | 1400 | 10.49 | 3750  | -2200 | 1550   |
|      |              |         |      |     | 1200     | 1300 | 8.46  | 3000  | -2500 | 500    |
|      |              |         |      |     | 1100     | 1200 | 7.56  | 2800  | -2900 | -100   |
|      |              |         |      |     | 1000     | 1100 | 4.57  | 2250  | -3400 | -1150  |
|      |              |         |      |     | 900      | 1000 | 2.38  | 1800  | -4000 | -2200  |
|      |              |         |      |     | 800      | 900  | 0.84  | 1400  | -4700 | -3300  |
|      |              |         |      |     | 700      | 800  | 0.51  | 1000  | -5400 | -4400  |

| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW    | BS     | BA     |
|------|----------------|---------|------|-----|----------|------|-------|-------|--------|--------|
|      |                |         |      |     | FROM     | TO   | KM²   | MM    | MM     | MM     |
| 44.5 | ENGABREEN      | NO67011 | 2010 |     | 600      | 700  | 0.35  | 500   | -6200  | -5700  |
|      |                |         |      |     | 500      | 600  | 0.26  | 0     | -7000  | -7000  |
|      |                |         |      |     | 400      | 500  | 0.17  | -500  | -7850  | -8350  |
|      |                |         |      |     | 300      | 400  | 0.13  | -1000 | -8750  | -9750  |
|      |                |         |      |     | 200      | 300  | 0.18  | -1500 | -9700  | -11200 |
|      |                |         |      |     | 100      | 200  | 0.086 | -2000 | -10650 | -12650 |
|      |                |         |      |     | 89       | 100  | 0.001 | -2270 | -11200 | -13470 |
|      |                |         |      |     | 89       | 1574 | 38.7  | 2870  | -2900  | -30    |
|      |                |         |      |     | 1500     | 1574 | 0.1   | 2000  | -1700  | 300    |
|      |                |         |      |     | 1400     | 1500 | 2.65  | 2600  | -1800  | 800    |
|      |                |         |      |     | 1300     | 1400 | 10.49 | 2400  | -2000  | 400    |
|      |                |         |      |     | 1200     | 1300 | 8.46  | 2350  | -2300  | 50     |
|      |                |         |      |     | 1100     | 1200 | 7.56  | 2000  | -2600  | -600   |
|      |                |         |      |     | 1000     | 1100 | 4.57  | 1700  | -3000  | -1300  |
|      |                |         |      |     | 900      | 1000 | 2.38  | 1350  | -3400  | -2050  |
|      |                |         |      |     | 800      | 900  | 0.84  | 1000  | -3900  | -2900  |
|      |                |         |      |     | 700      | 800  | 0.51  | 650   | -4400  | -3750  |
|      |                |         |      |     | 600      | 700  | 0.35  | 300   | -4900  | -4600  |
|      |                |         |      |     | 500      | 600  | 0.26  | 0     | -5400  | -5400  |
| 45.1 | GRAAFJELLSBREA | NO      | 2006 |     | 400      | 500  | 0.17  | -300  | -6000  | -6300  |
|      |                |         |      |     | 300      | 400  | 0.13  | -600  | -6600  | -7200  |
|      |                |         |      |     | 200      | 300  | 0.18  | -900  | -7200  | -8100  |
|      |                |         |      |     | 100      | 200  | 0.09  | -1300 | -7800  | -9100  |
|      |                |         |      |     | 89       | 100  | 0.001 | -1550 | -8200  | -9750  |
|      |                |         |      |     | 89       | 1574 | 38.74 | 2040  | -2560  | -520   |
|      |                |         |      |     | 1600     | 1659 | 0.68  | 1550  | -3700  | -2150  |
|      |                |         |      |     | 1550     | 1600 | 2.21  | 1650  | -3800  | -2150  |
|      |                |         |      |     | 1500     | 1550 | 2.03  | 1600  | -4000  | -2400  |
|      |                |         |      |     | 1450     | 1500 | 1.28  | 1450  | -4350  | -2900  |
|      |                |         |      |     | 1400     | 1450 | 0.7   | 1250  | -4750  | -3500  |
|      |                |         |      |     | 1350     | 1400 | 0.54  | 1100  | -5150  | -4050  |
|      |                |         |      |     | 1300     | 1350 | 0.44  | 950   | -5550  | -4600  |
|      |                |         |      |     | 1250     | 1300 | 0.38  | 850   | -5850  | -5000  |
|      |                |         |      |     | 1200     | 1250 | 0.16  | 750   | -6100  | -5350  |
|      |                |         |      |     | 1150     | 1200 | 0.18  | 700   | -6350  | -5650  |
|      |                |         |      |     | 1100     | 1150 | 0.23  | 650   | -6550  | -5900  |
|      |                |         |      |     | 1051     | 1100 | 0.11  | 700   | -6700  | -6000  |
|      |                |         |      |     | 1051     | 1659 | 8.94  | 1400  | -4450  | -3050  |
| 45.2 | GRAAFJELLSBREA | NO      | 2007 |     | 1600     | 1651 | 0.5   | 4000  | -2150  | 1850   |
|      |                |         |      |     | 1550     | 1600 | 1.72  | 3950  | -2250  | 1700   |
|      |                |         |      |     | 1500     | 1550 | 2.13  | 3850  | -2400  | 1450   |
|      |                |         |      |     | 1450     | 1500 | 1.49  | 3700  | -2700  | 1000   |
|      |                |         |      |     | 1400     | 1450 | 0.81  | 3500  | -3100  | 400    |
|      |                |         |      |     | 1350     | 1400 | 0.49  | 3300  | -3550  | -250   |
|      |                |         |      |     | 1300     | 1350 | 0.41  | 3050  | -3950  | -900   |
|      |                |         |      |     | 1250     | 1300 | 0.34  | 2800  | -4300  | -1500  |
|      |                |         |      |     | 1200     | 1250 | 0.15  | 2550  | -4600  | -2050  |
|      |                |         |      |     | 1150     | 1200 | 0.08  | 2300  | -4850  | -2550  |
|      |                |         |      |     | 1100     | 1150 | 0.12  | 2050  | -5050  | -3000  |
|      |                |         |      |     | 1049     | 1100 | 0.16  | 1850  | -5250  | -3400  |
|      |                |         |      |     | 1049     | 1651 | 8.9   | 3600  | -2850  | 750    |
| 45.3 | GRAAFJELLSBREA | NO      | 2008 |     | 1600     | 1651 | 0.5   | 2850  | -1900  | 950    |
|      |                |         |      |     | 1550     | 1600 | 1.72  | 2050  | -2050  | 1000   |
|      |                |         |      |     | 1500     | 1550 | 2.13  | 2800  | -2350  | 450    |
|      |                |         |      |     | 1450     | 1500 | 1.49  | 2600  | -2750  | -150   |
|      |                |         |      |     | 1400     | 1450 | 0.81  | 2450  | -3150  | -700   |
|      |                |         |      |     | 1350     | 1400 | 0.49  | 2350  | -3600  | -1250  |

| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA | BW   | BS    | BA    |
|------|----------------|---------|------|-----|----------|------|------|------|-------|-------|
|      |                |         |      |     | FROM     | TO   | KM²  | MM   | MM    | MM    |
| 45.4 | GRAAFJELLSBREA | NO      | 2009 |     | 1300     | 1350 | 0.41 | 2250 | -3950 | -1700 |
|      |                |         |      |     | 1250     | 1300 | 0.34 | 2150 | -4300 | -2150 |
|      |                |         |      |     | 1200     | 1250 | 0.15 | 2080 | -4550 | -2480 |
|      |                |         |      |     | 1150     | 1200 | 0.08 | 2000 | -4800 | -2800 |
|      |                |         |      |     | 1100     | 1150 | 0.12 | 1950 | -5000 | -3050 |
|      |                |         |      |     | 1049     | 1100 | 0.16 | 1900 | -5200 | -3300 |
|      |                |         |      |     | 1049     | 1651 | 8.41 | 2660 | -2800 | -140  |
|      |                |         |      |     | 1600     | 1651 | 0.5  | 2700 | -2250 | 450   |
|      |                |         |      |     | 1550     | 1600 | 1.72 | 2550 | -2380 | 170   |
|      |                |         |      |     | 1500     | 1550 | 2.13 | 2450 | -2550 | -100  |
|      |                |         |      |     | 1450     | 1500 | 1.49 | 2350 | -2800 | -450  |
|      |                |         |      |     | 1400     | 1450 | 0.81 | 2250 | -3100 | -850  |
|      |                |         |      |     | 1350     | 1400 | 0.49 | 2150 | -3400 | -1250 |
|      |                |         |      |     | 1300     | 1350 | 0.41 | 2050 | -3700 | -1650 |
|      |                |         |      |     | 1250     | 1300 | 0.34 | 1950 | -4000 | -2050 |
|      |                |         |      |     | 1200     | 1250 | 0.15 | 1830 | -4250 | -2420 |
|      |                |         |      |     | 1150     | 1200 | 0.08 | 1700 | -4480 | -2780 |
|      |                |         |      |     | 1100     | 1150 | 0.12 | 1600 | -4700 | -3100 |
|      |                |         |      |     | 1049     | 1100 | 0.16 | 1480 | -4900 | -3420 |
|      |                |         |      |     | 1049     | 1651 | 8.41 | 2340 | -2880 | -540  |
| 45.5 | GRAAFJELLSBREA | NO      | 2010 |     | 1600     | 1651 | 0.5  | 1650 | -2950 | -1300 |
|      |                |         |      |     | 1550     | 1600 | 1.72 | 1630 | -3000 | -1370 |
|      |                |         |      |     | 1500     | 1550 | 2.13 | 1600 | -3050 | -1450 |
|      |                |         |      |     | 1450     | 1500 | 1.49 | 1550 | -3200 | -1650 |
|      |                |         |      |     | 1400     | 1450 | 0.81 | 1450 | -3400 | -1950 |
|      |                |         |      |     | 1350     | 1400 | 0.49 | 1350 | -3700 | -2350 |
|      |                |         |      |     | 1300     | 1350 | 0.41 | 1300 | -4050 | -2750 |
|      |                |         |      |     | 1250     | 1300 | 0.34 | 1230 | -4350 | -3120 |
|      |                |         |      |     | 1200     | 1250 | 0.15 | 1180 | -4630 | -3450 |
|      |                |         |      |     | 1150     | 1200 | 0.08 | 1130 | -4850 | -3720 |
|      |                |         |      |     | 1100     | 1150 | 0.12 | 1080 | -5050 | -3970 |
|      |                |         |      |     | 1049     | 1100 | 0.16 | 1050 | -5250 | -4200 |
|      |                |         |      |     | 1049     | 1651 | 8.41 | 1510 | -3350 | -1840 |
|      |                |         |      |     | 2250     | 2290 | 0.04 | 480  | -2500 | -2020 |
|      |                |         |      |     | 2200     | 2250 | 0.17 | 310  | -2550 | -2240 |
|      |                |         |      |     | 2150     | 2200 | 0.26 | 480  | -2600 | -2120 |
|      |                |         |      |     | 2100     | 2150 | 0.34 | 330  | -2550 | -2220 |
|      |                |         |      |     | 2050     | 2100 | 0.37 | 390  | -2550 | -2160 |
|      |                |         |      |     | 2000     | 2050 | 0.42 | 570  | -2550 | -1980 |
|      |                |         |      |     | 1950     | 2000 | 0.36 | 660  | -2600 | -1940 |
|      |                |         |      |     | 1900     | 1950 | 0.14 | 730  | -2700 | -1970 |
|      |                |         |      |     | 1830     | 1900 | 0.15 | 710  | -2750 | -2040 |
|      |                |         |      |     | 1830     | 2290 | 2.25 | 510  | -2590 | -2080 |
| 46.2 | GRAASUBREEN    | NO0547  | 2007 |     | 2250     | 2290 | 0.04 | 740  | -700  | 40    |
|      |                |         |      |     | 2200     | 2250 | 0.17 | 340  | -890  | -550  |
|      |                |         |      |     | 2150     | 2200 | 0.26 | 560  | -1100 | -540  |
|      |                |         |      |     | 2100     | 2150 | 0.34 | 430  | -1320 | -890  |
|      |                |         |      |     | 2050     | 2100 | 0.37 | 430  | -1340 | -910  |
|      |                |         |      |     | 2000     | 2050 | 0.42 | 600  | -1570 | -970  |
|      |                |         |      |     | 1950     | 2000 | 0.36 | 840  | -1350 | -510  |
|      |                |         |      |     | 1900     | 1950 | 0.14 | 990  | -1370 | -380  |
|      |                |         |      |     | 1830     | 1900 | 0.15 | 880  | -1410 | -530  |
|      |                |         |      |     | 1830     | 2290 | 2.3  | 610  | -1320 | -710  |
| 46.3 | GRAASUBREEN    | NO0547  | 2008 |     | 2250     | 2290 | 0.04 | 850  | -300  | 550   |
|      |                |         |      |     | 2200     | 2250 | 0.17 | 690  | -430  | 260   |
|      |                |         |      |     | 2150     | 2200 | 0.26 | 1010 | -560  | 450   |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA   | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|--------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²    | MM   | MM    | MM    |
| 46.4 | GRAASUBREEN  | NO0547  | 2009 |     | 2100     | 2150 | 0.34   | 790  | -670  | 120   |
|      |              |         |      |     | 2050     | 2100 | 0.37   | 730  | -800  | -70   |
|      |              |         |      |     | 2000     | 2050 | 0.42   | 860  | -970  | -110  |
|      |              |         |      |     | 1950     | 2000 | 0.36   | 1160 | -1130 | 30    |
|      |              |         |      |     | 1900     | 1950 | 0.14   | 1360 | -1230 | 130   |
|      |              |         |      |     | 1830     | 1900 | 0.15   | 1370 | -1350 | 20    |
|      |              |         |      |     | 1830     | 2290 | 2.25   | 950  | -860  | 90    |
|      |              |         |      |     | 2250     | 2300 | 0.03   | 700  | -520  | 180   |
|      |              |         |      |     | 2200     | 2250 | 0.15   | 660  | -700  | -40   |
|      |              |         |      |     | 2150     | 2200 | 0.26   | 840  | -900  | -60   |
|      |              |         |      |     | 2100     | 2150 | 0.35   | 570  | -980  | -410  |
|      |              |         |      |     | 2050     | 2100 | 0.36   | 710  | -1220 | -510  |
|      |              |         |      |     | 2000     | 2050 | 0.41   | 810  | -1150 | -340  |
|      |              |         |      |     | 1950     | 2000 | 0.32   | 980  | -1150 | -170  |
|      |              |         |      |     | 1900     | 1950 | 0.13   | 1090 | -1260 | -170  |
|      |              |         |      |     | 1833     | 1900 | 0.11   | 1150 | -1400 | -250  |
|      |              |         |      |     | 1833     | 2300 | 2.12   | 810  | -1080 | -280  |
| 46.5 | GRAASUBREEN  | NO0547  | 2010 |     | 2250     | 2300 | 0.03   | 1190 | -900  | 290   |
|      |              |         |      |     | 2200     | 2250 | 0.15   | 680  | -1000 | -320  |
|      |              |         |      |     | 2150     | 2200 | 0.26   | 570  | -1150 | -580  |
|      |              |         |      |     | 2100     | 2150 | 0.35   | 480  | -1300 | -820  |
|      |              |         |      |     | 2050     | 2100 | 0.36   | 410  | -1500 | -1090 |
|      |              |         |      |     | 2000     | 2050 | 0.41   | 500  | -1750 | -1250 |
|      |              |         |      |     | 1950     | 2000 | 0.32   | 590  | -2000 | -1410 |
|      |              |         |      |     | 1900     | 1950 | 0.13   | 600  | -2250 | -1650 |
|      |              |         |      |     | 1833     | 1900 | 0.11   | 650  | -2500 | -1850 |
|      |              |         |      |     | 1833     | 2300 | 2.12   | 540  | -1600 | -1060 |
| 47.1 | HANSBREEN    | NO12419 | 2006 | FXD | 450      | 510  | 6.71   | 1684 | -950  | 734   |
|      |              |         |      |     | 400      | 450  | 7.39   | 1738 | -688  | 1050  |
|      |              |         |      |     | 350      | 400  | 8.103  | 1380 | -840  | 540   |
|      |              |         |      |     | 300      | 350  | 8.555  | 1228 | -1123 | 105   |
|      |              |         |      |     | 250      | 300  | 8.25   | 1168 | -1420 | -252  |
|      |              |         |      |     | 200      | 250  | 6.578  | 1296 | -1395 | -99   |
|      |              |         |      |     | 150      | 200  | 5.125  | 1116 | -1764 | -648  |
|      |              |         |      |     | 100      | 150  | 3.817  | 672  | -2004 | -1332 |
|      |              |         |      |     | 0        | 100  | 2.215  | 588  | -1290 | -702  |
|      |              |         |      |     | 0        | 510  | 56.742 | 1297 | -1204 | 93    |
| 47.2 | HANSBREEN    | NO12419 | 2007 | FXD | 450      | 510  | 6.71   | 1356 | -203  | 1153  |
|      |              |         |      |     | 400      | 450  | 7.39   | 1408 | -448  | 960   |
|      |              |         |      |     | 350      | 400  | 8.103  | 1144 | -724  | 420   |
|      |              |         |      |     | 300      | 350  | 8.555  | 1012 | -1080 | -68   |
|      |              |         |      |     | 250      | 300  | 8.25   | 780  | -1392 | -612  |
|      |              |         |      |     | 200      | 250  | 6.578  | 1000 | -1423 | -423  |
|      |              |         |      |     | 150      | 200  | 5.125  | 812  | -1226 | -414  |
|      |              |         |      |     | 100      | 150  | 3.817  | 728  | -1565 | -837  |
|      |              |         |      |     | 0        | 100  | 2.215  | 460  | -2602 | -2142 |
|      |              |         |      |     | 0        | 510  | 56.742 | 1029 | -1033 | -4    |
| 47.3 | HANSBREEN    | NO12419 | 2008 | FXD | 450      | 510  | 6.71   | 1576 | -378  | 1198  |
|      |              |         |      |     | 400      | 450  | 7.39   | 1580 | -677  | 903   |
|      |              |         |      |     | 350      | 400  | 8.103  | 1516 | -646  | 870   |
|      |              |         |      |     | 300      | 350  | 8.555  | 1140 | -1065 | 75    |
|      |              |         |      |     | 250      | 300  | 8.25   | 1000 | -1315 | -315  |
|      |              |         |      |     | 200      | 250  | 6.578  | 1212 | -1113 | 99    |
|      |              |         |      |     | 150      | 200  | 5.125  | 844  | -1663 | -819  |
|      |              |         |      |     | 100      | 150  | 3.817  | 860  | -1850 | -990  |



| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA   | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|--------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²    | MM   | MM    | MM    |
|      |              |         |      |     | 0        | 100  | 2.215  | 632  | -2450 | -1818 |
|      |              |         |      |     | 0        | 510  | 56.742 | 1225 | -1076 | 149   |
| 47.4 | HANSBREEN    | NO12419 | 2009 | FXD | 450      | 510  | 6.71   | 982  | -1203 | -221  |
|      |              |         |      |     | 400      | 450  | 7.39   | 1078 | -826  | 252   |
|      |              |         |      |     | 350      | 400  | 8.103  | 872  | -1150 | -278  |
|      |              |         |      |     | 300      | 350  | 8.555  | 720  | -1410 | -690  |
|      |              |         |      |     | 250      | 300  | 8.25   | 608  | -2156 | -1548 |
|      |              |         |      |     | 200      | 250  | 6.578  | 604  | -1990 | -1386 |
|      |              |         |      |     | 150      | 200  | 5.125  | 412  | -2203 | -1791 |
|      |              |         |      |     | 100      | 150  | 3.817  | 632  | -2018 | -1386 |
|      |              |         |      |     | 0        | 100  | 2.215  | 380  | -2063 | -1683 |
|      |              |         |      |     | 0        | 510  | 56.742 | 743  | -1586 | -844  |
| 47.5 | HANSBREEN    | NO12419 | 2010 | FXD | 450      | 510  | 6.71   | 1540 | -335  | 1205  |
|      |              |         |      |     | 400      | 450  | 7.39   | 1615 | -330  | 1285  |
|      |              |         |      |     | 350      | 400  | 8.103  | 1388 | -570  | 818   |
|      |              |         |      |     | 300      | 350  | 8.555  | 1028 | -1050 | -22   |
|      |              |         |      |     | 250      | 300  | 8.25   | 812  | -1469 | -657  |
|      |              |         |      |     | 200      | 250  | 6.578  | 720  | -1503 | -783  |
|      |              |         |      |     | 150      | 200  | 5.125  | 620  | -1799 | -1179 |
|      |              |         |      |     | 100      | 150  | 3.817  | 676  | -1783 | -1107 |
|      |              |         |      |     | 0        | 100  | 2.215  | 380  | -2180 | -1800 |
|      |              |         |      |     | 0        | 510  | 56.742 | 1063 | -1078 | -14   |
| 48.1 | HANSEBREEN   | NO36206 | 2006 |     | 1300     | 1327 | 0.18   | 2500 | -6100 | -3600 |
|      |              |         |      |     | 1250     | 1300 | 0.5    | 2550 | -6250 | -3700 |
|      |              |         |      |     | 1200     | 1250 | 0.45   | 2600 | -6450 | -3850 |
|      |              |         |      |     | 1150     | 1200 | 0.51   | 2600 | -6600 | -4000 |
|      |              |         |      |     | 1100     | 1150 | 0.62   | 2100 | -6650 | -4550 |
|      |              |         |      |     | 1050     | 1100 | 0.4    | 2300 | -6500 | -4200 |
|      |              |         |      |     | 1000     | 1050 | 0.23   | 2500 | -6250 | -3750 |
|      |              |         |      |     | 950      | 1000 | 0.13   | 2800 | -6000 | -3200 |
|      |              |         |      |     | 930      | 950  | 0.03   | 3000 | -5800 | -2800 |
|      |              |         |      |     | 930      | 1327 | 3.1    | 2450 | -6430 | -3980 |
| 48.2 | HANSEBREEN   | NO36206 | 2007 |     | 1300     | 1327 | 0.18   | 4200 | -2900 | 1300  |
|      |              |         |      |     | 1250     | 1300 | 0.5    | 4300 | -2900 | 1400  |
|      |              |         |      |     | 1200     | 1250 | 0.45   | 4350 | -2950 | 1400  |
|      |              |         |      |     | 1150     | 1200 | 0.51   | 4300 | -3050 | 1250  |
|      |              |         |      |     | 1100     | 1150 | 0.62   | 3850 | -3200 | 650   |
|      |              |         |      |     | 1050     | 1100 | 0.4    | 3700 | -3500 | 200   |
|      |              |         |      |     | 1000     | 1050 | 0.23   | 3750 | -3850 | -100  |
|      |              |         |      |     | 950      | 1000 | 0.13   | 3950 | -4350 | -400  |
|      |              |         |      |     | 930      | 950  | 0.03   | 4100 | -4700 | -600  |
|      |              |         |      |     | 930      | 1327 | 0      | 4070 | -3230 | 840   |
| 48.3 | HANSEBREEN   | NO36206 | 2008 |     | 1300     | 1327 | 0.18   | 4000 | -2800 | 1200  |
|      |              |         |      |     | 1250     | 1300 | 0.5    | 4050 | -2900 | 1150  |
|      |              |         |      |     | 1200     | 1250 | 0.45   | 4100 | -3100 | 1000  |
|      |              |         |      |     | 1150     | 1200 | 0.51   | 4050 | -3400 | 650   |
|      |              |         |      |     | 1100     | 1150 | 0.62   | 3800 | -3800 | 0     |
|      |              |         |      |     | 1050     | 1100 | 0.4    | 3650 | -4250 | -600  |
|      |              |         |      |     | 1000     | 1050 | 0.23   | 3600 | -4800 | -1200 |
|      |              |         |      |     | 950      | 1000 | 0.13   | 3800 | -5350 | -1550 |
|      |              |         |      |     | 930      | 950  | 0.03   | 3950 | -5750 | -1800 |
|      |              |         |      |     | 930      | 1327 | 3.06   | 3900 | -3650 | 260   |
| 48.4 | HANSEBREEN   | NO36206 | 2009 |     | 1300     | 1350 | 0.18   | 3700 | -3850 | -150  |
|      |              |         |      |     | 1250     | 1300 | 0.5    | 3900 | -4000 | -100  |
|      |              |         |      |     | 1200     | 1250 | 0.45   | 4000 | -4250 | -250  |

| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA | BW   | BS    | BA    |
|------|----------------|---------|------|-----|----------|------|------|------|-------|-------|
|      |                |         |      |     | FROM     | TO   | KM²  | MM   | MM    | MM    |
|      |                |         |      |     | 1150     | 1200 | 0.51 | 3650 | -4450 | -800  |
|      |                |         |      |     | 1100     | 1150 | 0.62 | 3100 | -4600 | -1500 |
|      |                |         |      |     | 1050     | 1100 | 0.4  | 2900 | -4700 | -1800 |
|      |                |         |      |     | 1000     | 1050 | 0.23 | 2950 | -4750 | -1800 |
|      |                |         |      |     | 950      | 1000 | 0.13 | 3050 | -4800 | -1750 |
|      |                |         |      |     | 930      | 950  | 0.03 | 3100 | -4830 | -1730 |
|      |                |         |      |     | 930      | 1350 | 3.06 | 3450 | -4420 | -970  |
| 48.5 | HANSEBREEN     | NO36206 | 2010 |     | 1250     | 1310 | 0.5  | 2230 | -3900 | -1670 |
|      |                |         |      |     | 1200     | 1250 | 0.42 | 2330 | -4100 | -1770 |
|      |                |         |      |     | 1150     | 1200 | 0.47 | 2250 | -4250 | -2000 |
|      |                |         |      |     | 1100     | 1150 | 0.54 | 2050 | -4400 | -2350 |
|      |                |         |      |     | 1050     | 1100 | 0.5  | 1850 | -4550 | -2700 |
|      |                |         |      |     | 1000     | 1050 | 0.21 | 1800 | -4730 | -2930 |
|      |                |         |      |     | 950      | 1000 | 0.1  | 1850 | -4880 | -3030 |
|      |                |         |      |     | 927      | 950  | 0.02 | 1930 | -5000 | -3070 |
|      |                |         |      |     | 927      | 1310 | 2.75 | 2100 | -4310 | -2220 |
| 49.1 | HELLSTUGUBREEN | NO0511  | 2006 |     | 2150     | 2210 | 0.02 | 850  | -1000 | -150  |
|      |                |         |      |     | 2100     | 2150 | 0.09 | 860  | -1300 | -440  |
|      |                |         |      |     | 2050     | 2100 | 0.28 | 880  | -1300 | -420  |
|      |                |         |      |     | 2000     | 2050 | 0.18 | 880  | -1600 | -720  |
|      |                |         |      |     | 1950     | 2000 | 0.38 | 890  | -2100 | -1210 |
|      |                |         |      |     | 1900     | 1950 | 0.61 | 760  | -2400 | -1640 |
|      |                |         |      |     | 1850     | 1900 | 0.35 | 800  | -2700 | -1900 |
|      |                |         |      |     | 1800     | 1850 | 0.33 | 680  | -3000 | -2320 |
|      |                |         |      |     | 1750     | 1800 | 0.13 | 540  | -3300 | -2760 |
|      |                |         |      |     | 1700     | 1750 | 0.1  | 750  | -3600 | -2850 |
|      |                |         |      |     | 1650     | 1700 | 0.17 | 530  | -3900 | -3370 |
|      |                |         |      |     | 1600     | 1650 | 0.13 | 590  | -4200 | -3610 |
|      |                |         |      |     | 1550     | 1600 | 0.16 | 380  | -4500 | -4120 |
|      |                |         |      |     | 1500     | 1550 | 0.08 | 230  | -4800 | -4570 |
|      |                |         |      |     | 1480     | 1500 | 0.02 | 210  | -5150 | -4940 |
|      |                |         |      |     | 1480     | 2210 | 3.03 | 730  | -2740 | -2010 |
| 49.2 | HELLSTUGUBREEN | NO0511  | 2007 |     | 2150     | 2210 | 0.02 | 1200 | -600  | 600   |
|      |                |         |      |     | 2100     | 2150 | 0.09 | 1240 | -750  | 490   |
|      |                |         |      |     | 2050     | 2100 | 0.28 | 1360 | -920  | 440   |
|      |                |         |      |     | 2000     | 2050 | 0.18 | 1490 | -1050 | 440   |
|      |                |         |      |     | 1950     | 2000 | 0.38 | 1220 | -1220 | 0     |
|      |                |         |      |     | 1900     | 1950 | 0.61 | 1150 | -1400 | -250  |
|      |                |         |      |     | 1850     | 1900 | 0.35 | 920  | -1700 | -780  |
|      |                |         |      |     | 1800     | 1850 | 0.33 | 1080 | -1900 | -820  |
|      |                |         |      |     | 1750     | 1800 | 0.13 | 910  | -2100 | -1190 |
|      |                |         |      |     | 1700     | 1750 | 0.1  | 850  | -2300 | -1450 |
|      |                |         |      |     | 1650     | 1700 | 0.17 | 770  | -2500 | -1730 |
|      |                |         |      |     | 1600     | 1650 | 0.13 | 610  | -2700 | -2090 |
|      |                |         |      |     | 1550     | 1600 | 0.16 | 300  | -3000 | -2700 |
|      |                |         |      |     | 1500     | 1550 | 0.08 | 170  | -3250 | -3080 |
|      |                |         |      |     | 1480     | 1500 | 0.02 | 0    | -3420 | -3420 |
|      |                |         |      |     | 1480     | 2210 | 3    | 1030 | -1700 | -670  |
| 49.3 | HELLSTUGUBREEN | NO0511  | 2008 |     | 2150     | 2210 | 0.02 | 1800 | -200  | 1600  |
|      |                |         |      |     | 2100     | 2150 | 0.09 | 1720 | -410  | 1310  |
|      |                |         |      |     | 2050     | 2150 | 0.28 | 1890 | -500  | 1390  |
|      |                |         |      |     | 2000     | 2050 | 0.18 | 1950 | -760  | 1190  |
|      |                |         |      |     | 1950     | 2000 | 0.38 | 1570 | -980  | 590   |
|      |                |         |      |     | 1900     | 1950 | 0.61 | 1570 | -1200 | 370   |
|      |                |         |      |     | 1850     | 1900 | 0.35 | 1360 | -1440 | -80   |
|      |                |         |      |     | 1800     | 1850 | 0.33 | 1360 | -1700 | -340  |
|      |                |         |      |     | 1750     | 1800 | 0.13 | 1240 | -1940 | -700  |

| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 49.4 | HELLSTUGUBREEN | NO0511  | 2009 |     | 1700     | 1750 | 0.1   | 1090 | -2160 | -1070 |
|      |                |         |      |     | 1650     | 1700 | 0.17  | 1050 | -2350 | -1300 |
|      |                |         |      |     | 1600     | 1650 | 0.13  | 900  | -2600 | -1700 |
|      |                |         |      |     | 1550     | 1600 | 0.16  | 630  | -2850 | -2220 |
|      |                |         |      |     | 1500     | 1550 | 0.08  | 490  | -3130 | -2640 |
|      |                |         |      |     | 1480     | 1500 | 0.02  | 430  | -3300 | -2870 |
|      |                |         |      |     | 1480     | 2210 | 3.03  | 1410 | -1470 | -60   |
|      |                |         |      |     | 2150     | 2229 | 0.02  | 1600 | -300  | 1300  |
|      |                |         |      |     | 2100     | 2150 | 0.08  | 1440 | -500  | 940   |
|      |                |         |      |     | 2050     | 2100 | 0.29  | 1730 | -600  | 1130  |
|      |                |         |      |     | 2000     | 2050 | 0.18  | 1650 | -920  | 730   |
|      |                |         |      |     | 1950     | 2000 | 0.31  | 1420 | -1180 | 240   |
|      |                |         |      |     | 1900     | 1950 | 0.6   | 1380 | -1350 | 30    |
|      |                |         |      |     | 1850     | 1900 | 0.37  | 1260 | -1500 | -240  |
|      |                |         |      |     | 1800     | 1850 | 0.33  | 1200 | -1700 | -500  |
|      |                |         |      |     | 1750     | 1800 | 0.16  | 990  | -1900 | -910  |
|      |                |         |      |     | 1700     | 1750 | 0.09  | 1250 | -2050 | -800  |
|      |                |         |      |     | 1650     | 1700 | 0.14  | 980  | -2250 | -1270 |
|      |                |         |      |     | 1600     | 1650 | 0.11  | 1170 | -2600 | -1430 |
| 49.5 | HELLSTUGUBREEN | NO0511  | 2010 |     | 1550     | 1600 | 0.12  | 760  | -3000 | -2240 |
|      |                |         |      |     | 1500     | 1550 | 0.08  | 640  | -3250 | -2610 |
|      |                |         |      |     | 1482     | 1500 | 0.01  | 500  | -3400 | -2900 |
|      |                |         |      |     | 1482     | 2229 | 2.9   | 1300 | -1530 | -230  |
|      |                |         |      |     | 2150     | 2229 | 0.02  | 920  | -950  | -30   |
|      |                |         |      |     | 2100     | 2150 | 0.08  | 850  | -1150 | -300  |
|      |                |         |      |     | 2050     | 2100 | 0.29  | 1090 | -1250 | -160  |
|      |                |         |      |     | 2000     | 2050 | 0.18  | 1100 | -1550 | -450  |
|      |                |         |      |     | 1950     | 2000 | 0.31  | 840  | -1750 | -910  |
|      |                |         |      |     | 1900     | 1950 | 0.6   | 810  | -1900 | -1090 |
|      |                |         |      |     | 1850     | 1900 | 0.37  | 740  | -2100 | -1360 |
|      |                |         |      |     | 1800     | 1850 | 0.33  | 690  | -2250 | -1560 |
|      |                |         |      |     | 1750     | 1800 | 0.16  | 390  | -2400 | -2010 |
|      |                |         |      |     | 1700     | 1750 | 0.09  | 430  | -2550 | -2120 |
|      |                |         |      |     | 1650     | 1700 | 0.14  | 580  | -2800 | -2220 |
|      |                |         |      |     | 1600     | 1650 | 0.11  | 390  | -3060 | -2670 |
|      |                |         |      |     | 1550     | 1600 | 0.12  | 330  | -3300 | -2970 |
|      |                |         |      |     | 1500     | 1550 | 0.08  | 520  | -3550 | -3030 |
|      |                |         |      |     | 1482     | 1500 | 0.01  | 300  | -3800 | -3500 |
| 50.1 | JUVFONNE       | NO      | 2010 |     | 1482     | 2229 | 2.9   | 750  | -2090 | -1340 |
|      |                |         |      |     | 1950     | 1998 | 0.02  | 570  | -3200 | -2630 |
|      |                |         |      |     | 1900     | 1950 | 0.063 | 600  | -3800 | -3200 |
|      |                |         |      |     | 1850     | 1900 | 0.082 | 730  | -4160 | -3430 |
|      |                |         |      |     | 1840     | 1850 | 0.006 | 840  | -4170 | -3330 |
| 51.1 | KONGSVEGEN     | NO15510 | 2006 | COM | 1840     | 1998 | 0.171 | 670  | -3910 | -3240 |
|      |                |         |      |     | 800      | 850  | 2     | 1556 | 118   | 1675  |
|      |                |         |      |     | 750      | 800  | 3.6   | 1459 | -70   | 1389  |
|      |                |         |      |     | 700      | 750  | 8.1   | 1361 | -258  | 1102  |
|      |                |         |      |     | 650      | 700  | 14.5  | 1263 | -447  | 816   |
|      |                |         |      |     | 600      | 650  | 13.2  | 1165 | -635  | 530   |
|      |                |         |      |     | 550      | 600  | 13.3  | 1067 | -824  | 243   |
|      |                |         |      |     | 500      | 550  | 10.9  | 970  | -1012 | -43   |
|      |                |         |      |     | 450      | 500  | 8.3   | 872  | -1201 | -329  |
|      |                |         |      |     | 400      | 450  | 5.2   | 774  | -1389 | -616  |
|      |                |         |      |     | 350      | 400  | 7.6   | 676  | -1578 | -902  |
|      |                |         |      |     | 300      | 350  | 4.3   | 578  | -1766 | -1188 |
|      |                |         |      |     | 250      | 300  | 4.3   | 480  | -1955 | -1474 |
|      |                |         |      |     | 200      | 250  | 3.4   | 383  | -2143 | -1761 |

| NR   | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                   |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 51.2 | KONGSVEGEN        | NO15510 | 2007 | COM | 150      | 200  | 2.4   | 285  | -2332 | -2047 |
|      |                   |         |      |     | 0        | 150  | 0.8   | 187  | -2520 | -2333 |
|      |                   |         |      |     | 0        | 850  | 101.9 | 990  | -972  | 18    |
|      |                   |         |      |     | 800      | 850  | 2     | 997  | 111   | 1109  |
|      |                   |         |      |     | 750      | 800  | 3.6   | 944  | -42   | 902   |
|      |                   |         |      |     | 700      | 750  | 8.1   | 890  | -196  | 695   |
|      |                   |         |      |     | 650      | 700  | 14.5  | 837  | -349  | 488   |
|      |                   |         |      |     | 600      | 650  | 13.2  | 783  | -502  | 281   |
|      |                   |         |      |     | 550      | 600  | 13.3  | 730  | -656  | 74    |
|      |                   |         |      |     | 500      | 550  | 10.9  | 676  | -809  | -133  |
|      |                   |         |      |     | 450      | 500  | 8.3   | 623  | -963  | -340  |
|      |                   |         |      |     | 400      | 450  | 5.2   | 569  | -1116 | -547  |
|      |                   |         |      |     | 350      | 400  | 7.6   | 516  | -1270 | -754  |
|      |                   |         |      |     | 300      | 350  | 4.3   | 462  | -1423 | -961  |
|      |                   |         |      |     | 250      | 300  | 4.3   | 409  | -1577 | -1168 |
|      |                   |         |      |     | 200      | 250  | 3.4   | 355  | -1730 | -1375 |
|      |                   |         |      |     | 150      | 200  | 2.4   | 302  | -1884 | -1582 |
|      |                   |         |      |     | 100      | 150  | 0.8   | 248  | -2037 | -1789 |
|      |                   |         |      |     | 0        | 150  | 0.05  | 195  | -2191 | -1996 |
|      |                   |         |      |     | 0        | 850  | 101.9 | 687  | -777  | -90   |
| 51.3 | KONGSVEGEN        | NO15510 | 2008 | COM | 800      | 850  | 2     | 1084 | 564   | 1648  |
|      |                   |         |      |     | 750      | 800  | 3.6   | 1023 | 412   | 1435  |
|      |                   |         |      |     | 700      | 750  | 8.1   | 963  | 260   | 1222  |
|      |                   |         |      |     | 650      | 700  | 14.5  | 902  | 108   | 1010  |
|      |                   |         |      |     | 600      | 650  | 13.2  | 841  | -44   | 797   |
|      |                   |         |      |     | 550      | 600  | 13.3  | 781  | -196  | 585   |
|      |                   |         |      |     | 500      | 550  | 10.9  | 720  | -348  | 372   |
|      |                   |         |      |     | 450      | 500  | 8.3   | 659  | -500  | 160   |
|      |                   |         |      |     | 400      | 450  | 5.2   | 598  | -651  | -53   |
|      |                   |         |      |     | 350      | 400  | 7.6   | 538  | -803  | -266  |
|      |                   |         |      |     | 300      | 350  | 4.3   | 477  | -955  | -478  |
|      |                   |         |      |     | 250      | 300  | 4.3   | 416  | -1107 | -691  |
|      |                   |         |      |     | 200      | 250  | 3.4   | 356  | -1259 | -903  |
|      |                   |         |      |     | 150      | 200  | 2.4   | 295  | -1411 | -1116 |
|      |                   |         |      |     | 0        | 150  | 0.8   | 234  | -1563 | -1328 |
|      |                   |         |      |     | 0        | 850  | 101.9 | 733  | -315  | 418   |
| 51.4 | KONGSVEGEN        | NO15510 | 2009 | COM | 800      | 850  | 2     | 916  | 187   | 1103  |
|      |                   |         |      |     | 750      | 800  | 3.6   | 867  | 32    | 899   |
|      |                   |         |      |     | 700      | 750  | 8.1   | 818  | -123  | 695   |
|      |                   |         |      |     | 650      | 700  | 14.5  | 769  | -278  | 491   |
|      |                   |         |      |     | 600      | 650  | 13.2  | 719  | -433  | 287   |
|      |                   |         |      |     | 550      | 600  | 13.3  | 670  | -588  | 83    |
|      |                   |         |      |     | 500      | 550  | 10.9  | 621  | -743  | -121  |
|      |                   |         |      |     | 450      | 500  | 8.3   | 572  | -898  | -325  |
|      |                   |         |      |     | 400      | 450  | 5.2   | 523  | -1052 | -530  |
|      |                   |         |      |     | 350      | 400  | 7.6   | 474  | -1207 | -734  |
|      |                   |         |      |     | 300      | 350  | 4.3   | 425  | -1362 | -938  |
|      |                   |         |      |     | 250      | 300  | 4.3   | 376  | -1517 | -1142 |
|      |                   |         |      |     | 200      | 250  | 3.4   | 326  | -1672 | -1346 |
|      |                   |         |      |     | 150      | 200  | 2.4   | 277  | -1827 | -1550 |
|      |                   |         |      |     | 0        | 150  | 0.8   | 228  | -1982 | -1754 |
|      |                   |         |      |     | 0        | 850  | 0     |      |       | -80   |
| 52.1 | LANGFJORDJOEKULEN | NO85008 | 2006 |     | 1000     | 1050 | 0.55  | 1600 | -2450 | -850  |
|      |                   |         |      |     | 900      | 1000 | 0.81  | 1650 | -2950 | -1300 |
|      |                   |         |      |     | 800      | 900  | 0.61  | 1600 | -3600 | -2000 |
|      |                   |         |      |     | 700      | 800  | 0.56  | 1450 | -4150 | -2700 |
|      |                   |         |      |     | 600      | 700  | 0.39  | 1250 | -4650 | -3400 |

| NR   | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA | BW   | BS    | BA    |
|------|-------------------|---------|------|-----|----------|------|------|------|-------|-------|
|      |                   |         |      |     | FROM     | TO   | KM²  | MM   | MM    | MM    |
| 52.2 | LANGFJORDJOEKULEN | NO85008 | 2007 |     | 500      | 600  | 0.35 | 1050 | -5050 | -4000 |
|      |                   |         |      |     | 400      | 500  | 0.25 | 900  | -5450 | -4550 |
|      |                   |         |      |     | 280      | 400  | 0.14 | 800  | -5900 | -5100 |
|      |                   |         |      |     | 280      | 1050 | 3.65 | 1420 | -3830 | -2410 |
|      |                   |         |      |     | 1000     | 1050 | 0.55 | 2500 | -1900 | 600   |
|      |                   |         |      |     | 900      | 1000 | 0.81 | 2450 | -2100 | 350   |
|      |                   |         |      |     | 800      | 900  | 0.61 | 2350 | -2450 | -100  |
|      |                   |         |      |     | 700      | 800  | 0.56 | 2200 | -2900 | -700  |
|      |                   |         |      |     | 600      | 700  | 0.39 | 1800 | -3500 | -1700 |
|      |                   |         |      |     | 500      | 600  | 0.35 | 1450 | -4100 | -2650 |
| 52.3 | LANGFJORDJOEKULEN | NO85008 | 2008 |     | 400      | 500  | 0.25 | 1150 | -4750 | -3600 |
|      |                   |         |      |     | 280      | 400  | 0.14 | 850  | -5450 | -4600 |
|      |                   |         |      |     | 280      | 1050 | 3.7  | 2090 | -2900 | -810  |
|      |                   |         |      |     | 1000     | 1050 | 0.42 | 1700 | -1150 | 550   |
|      |                   |         |      |     | 950      | 1000 | 0.47 | 1800 | -1300 | 500   |
|      |                   |         |      |     | 900      | 950  | 0.38 | 1850 | -1500 | 350   |
|      |                   |         |      |     | 850      | 900  | 0.36 | 1900 | -1700 | 200   |
|      |                   |         |      |     | 800      | 850  | 0.23 | 1850 | -1900 | -50   |
|      |                   |         |      |     | 750      | 800  | 0.22 | 1800 | -2100 | -300  |
|      |                   |         |      |     | 700      | 750  | 0.27 | 1700 | -2350 | -650  |
| 52.4 | LANGFJORDJOEKULEN | NO85008 | 2009 |     | 650      | 700  | 0.2  | 1600 | -2550 | -950  |
|      |                   |         |      |     | 600      | 650  | 0.17 | 1500 | -2800 | -1300 |
|      |                   |         |      |     | 550      | 600  | 0.13 | 1400 | -3000 | -1600 |
|      |                   |         |      |     | 500      | 550  | 0.12 | 1250 | -3200 | -1950 |
|      |                   |         |      |     | 450      | 500  | 0.1  | 1100 | -3400 | -2300 |
|      |                   |         |      |     | 400      | 450  | 0.1  | 1000 | -3650 | -2650 |
|      |                   |         |      |     | 350      | 400  | 0.05 | 850  | -3850 | -3000 |
|      |                   |         |      |     | 302      | 350  | 0.02 | 700  | -4100 | -3400 |
|      |                   |         |      |     | 302      | 1050 | 3.21 | 1670 | -2020 | -350  |
|      |                   |         |      |     | 1000     | 1050 | 0.42 | 2350 | -2500 | -150  |
| 52.5 | LANGFJORDJOEKULEN | NO85008 | 2010 |     | 950      | 1000 | 0.47 | 2300 | -2600 | -300  |
|      |                   |         |      |     | 900      | 950  | 0.38 | 2200 | -2700 | -500  |
|      |                   |         |      |     | 850      | 900  | 0.36 | 2000 | -2800 | -800  |
|      |                   |         |      |     | 800      | 850  | 0.23 | 1850 | -2950 | -1100 |
|      |                   |         |      |     | 750      | 800  | 0.22 | 1750 | -3100 | -1350 |
|      |                   |         |      |     | 700      | 750  | 0.27 | 1700 | -3300 | -1600 |
|      |                   |         |      |     | 650      | 700  | 0.2  | 1600 | -3550 | -1950 |
|      |                   |         |      |     | 600      | 650  | 0.17 | 1500 | -3850 | -2350 |
|      |                   |         |      |     | 550      | 600  | 0.13 | 1400 | -4150 | -2750 |
|      |                   |         |      |     | 500      | 550  | 0.12 | 1250 | -4500 | -3250 |
| 52.5 | LANGFJORDJOEKULEN | NO85008 | 2010 |     | 450      | 500  | 0.1  | 1150 | -4900 | -3750 |
|      |                   |         |      |     | 400      | 450  | 0.1  | 1110 | -5250 | -4140 |
|      |                   |         |      |     | 350      | 400  | 0.05 | 1050 | -5650 | -4600 |
|      |                   |         |      |     | 302      | 350  | 0.02 | 1110 | -6000 | -4890 |
|      |                   |         |      |     | 302      | 1050 | 3.2  | 1880 | -3210 | -1320 |
|      |                   |         |      |     | 1000     | 1050 | 0.42 | 2250 | -2180 | 70    |
|      |                   |         |      |     | 950      | 1000 | 0.47 | 2130 | -2230 | -100  |
|      |                   |         |      |     | 900      | 950  | 0.38 | 2080 | -2300 | -220  |
|      |                   |         |      |     | 850      | 900  | 0.36 | 2080 | -2400 | -320  |
|      |                   |         |      |     | 800      | 850  | 0.23 | 2080 | -2500 | -420  |
| 52.5 | LANGFJORDJOEKULEN | NO85008 | 2010 |     | 750      | 800  | 0.22 | 2000 | -2630 | -630  |
|      |                   |         |      |     | 700      | 750  | 0.27 | 1880 | -2750 | -870  |
|      |                   |         |      |     | 650      | 700  | 0.2  | 1720 | -2930 | -1210 |
|      |                   |         |      |     | 600      | 650  | 0.17 | 1580 | -3080 | -1500 |
|      |                   |         |      |     | 550      | 600  | 0.13 | 1380 | -3250 | -1870 |
|      |                   |         |      |     | 500      | 550  | 0.12 | 1200 | -3480 | -2280 |
|      |                   |         |      |     | 450      | 500  | 0.1  | 1050 | -3680 | -2630 |
|      |                   |         |      |     |          |      |      |      |       |       |
|      |                   |         |      |     |          |      |      |      |       |       |
|      |                   |         |      |     |          |      |      |      |       |       |

| NR   | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                   |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 53.1 | MIDTRE LOVENBREEN | NO15506 | 2006 | COM | 400      | 450  | 0.1   | 1000 | -3880 | -2880 |
|      |                   |         |      |     | 350      | 400  | 0.05  | 1000 | -4100 | -3100 |
|      |                   |         |      |     | 302      | 350  | 0.02  | 1050 | -4330 | -3280 |
|      |                   |         |      |     | 302      | 1050 | 3.21  | 1890 | -2650 | -760  |
|      |                   |         |      |     | 550      | 600  | 0.08  | 1168 | -288  | 881   |
|      |                   |         |      |     | 500      | 550  | 0.25  | 1083 | -479  | 604   |
|      |                   |         |      |     | 450      | 500  | 0.67  | 998  | -671  | 327   |
|      |                   |         |      |     | 400      | 450  | 0.81  | 912  | -863  | 49    |
|      |                   |         |      |     | 350      | 400  | 0.69  | 827  | -1055 | -228  |
|      |                   |         |      |     | 300      | 350  | 0.76  | 741  | -1246 | -505  |
|      |                   |         |      |     | 250      | 300  | 0.7   | 656  | -1438 | -782  |
|      |                   |         |      |     | 200      | 250  | 0.47  | 570  | -1630 | -1059 |
|      |                   |         |      |     | 150      | 200  | 0.43  | 485  | -1822 | -1337 |
|      |                   |         |      |     | 100      | 150  | 0.53  | 400  | -2013 | -1614 |
|      |                   |         |      |     | 50       | 100  | 0.06  | 314  | -2205 | -1891 |
|      |                   |         |      |     | 50       | 600  | 5.45  | 747  | -1233 | -486  |
| 53.2 | MIDTRE LOVENBREEN | NO15506 | 2007 | COM | 550      | 600  | 0.08  | 1051 | 7     | 1058  |
|      |                   |         |      |     | 500      | 550  | 0.25  | 985  | -193  | 793   |
|      |                   |         |      |     | 450      | 500  | 0.67  | 920  | -392  | 527   |
|      |                   |         |      |     | 400      | 450  | 0.81  | 854  | -592  | 262   |
|      |                   |         |      |     | 350      | 400  | 0.69  | 789  | -792  | -3    |
|      |                   |         |      |     | 300      | 350  | 0.76  | 723  | -992  | -269  |
|      |                   |         |      |     | 250      | 300  | 0.7   | 658  | -1191 | -534  |
|      |                   |         |      |     | 200      | 250  | 0.47  | 592  | -1391 | -799  |
|      |                   |         |      |     | 150      | 200  | 0.43  | 527  | -1591 | -1065 |
|      |                   |         |      |     | 100      | 150  | 0.53  | 461  | -1791 | -1330 |
|      |                   |         |      |     | 50       | 100  | 0.06  | 395  | -1991 | -1595 |
|      |                   |         |      |     | 50       | 600  | 5.45  | 728  | -978  | -251  |
| 53.3 | MIDTRE LOVENBREEN | NO15506 | 2008 | COM | 550      | 600  | 0.08  | 1064 | -1    | 1063  |
|      |                   |         |      |     | 500      | 550  | 0.25  | 1000 | -154  | 846   |
|      |                   |         |      |     | 450      | 500  | 0.67  | 936  | -307  | 628   |
|      |                   |         |      |     | 400      | 450  | 0.81  | 872  | -461  | 411   |
|      |                   |         |      |     | 350      | 400  | 0.69  | 808  | -614  | 194   |
|      |                   |         |      |     | 300      | 350  | 0.76  | 744  | -767  | -23   |
|      |                   |         |      |     | 250      | 300  | 0.7   | 680  | -921  | -241  |
|      |                   |         |      |     | 200      | 250  | 0.47  | 616  | -1074 | -458  |
|      |                   |         |      |     | 150      | 200  | 0.43  | 552  | -1227 | -675  |
|      |                   |         |      |     | 100      | 150  | 0.53  | 488  | -1380 | -893  |
|      |                   |         |      |     | 50       | 100  | 0.06  | 424  | -1534 | -1110 |
|      |                   |         |      |     | 50       | 600  | 5.45  | 748  | -757  | -9    |
| 53.4 | MIDTRE LOVENBREEN | NO15506 | 2009 | COM | 550      | 600  | 0.08  | 1029 | -249  | 780   |
|      |                   |         |      |     | 500      | 550  | 0.25  | 973  | -379  | 594   |
|      |                   |         |      |     | 450      | 500  | 0.67  | 916  | -508  | 408   |
|      |                   |         |      |     | 400      | 450  | 0.81  | 859  | -638  | 222   |
|      |                   |         |      |     | 350      | 400  | 0.69  | 803  | -767  | 35    |
|      |                   |         |      |     | 300      | 350  | 0.76  | 746  | -897  | -151  |
|      |                   |         |      |     | 250      | 300  | 0.7   | 690  | -1027 | -337  |
|      |                   |         |      |     | 200      | 250  | 0.47  | 633  | -1156 | -523  |
|      |                   |         |      |     | 150      | 200  | 0.43  | 577  | -1286 | -709  |
|      |                   |         |      |     | 100      | 150  | 0.53  | 520  | -1415 | -895  |
|      |                   |         |      |     | 50       | 100  | 0.06  | 464  | -1545 | -1081 |
|      |                   |         |      |     | 50       | 600  | 0     |      |       | -140  |
| 54.1 | NIGARDSBREEN      | NO31014 | 2006 |     | 1900     | 1960 | 0.38  | 2000 | -1900 | 100   |
|      |                   |         |      |     | 1800     | 1900 | 3.92  | 2100 | -2100 | 0     |
|      |                   |         |      |     | 1700     | 1800 | 9.39  | 2000 | -2350 | -350  |
|      |                   |         |      |     | 1600     | 1700 | 12.88 | 1850 | -2650 | -800  |
|      |                   |         |      |     | 1500     | 1600 | 9.18  | 1750 | -3000 | -1250 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS   | ALTITUDE |              | AREA    | BW     | BS     | BA     |       |      |       |      |
|------|--------------|---------|------|-------|----------|--------------|---------|--------|--------|--------|-------|------|-------|------|
|      |              |         |      |       | FROM     | TO           | KM²     | MM     | MM     | MM     |       |      |       |      |
|      |              |         |      |       | 1400     | 1500         | 5.82    | 1600   | -3500  | -1900  |       |      |       |      |
|      |              |         |      |       | 1300     | 1400         | 2.28    | 1450   | -4150  | -2700  |       |      |       |      |
|      |              |         |      |       | 1200     | 1300         | 0.9     | 1300   | -4850  | -3550  |       |      |       |      |
|      |              |         |      |       | 1100     | 1200         | 0.45    | 1150   | -5650  | -4500  |       |      |       |      |
|      |              |         |      |       | 1000     | 1100         | 0.58    | 1000   | -6350  | -5350  |       |      |       |      |
|      |              |         |      |       | 900      | 1000         | 0.47    | 850    | -7100  | -6250  |       |      |       |      |
|      |              |         |      |       | 800      | 900          | 0.44    | 700    | -7850  | -7150  |       |      |       |      |
|      |              |         |      |       | 700      | 800          | 0.33    | 500    | -8500  | -8000  |       |      |       |      |
|      |              |         |      |       | 600      | 700          | 0.39    | 300    | -9150  | -8850  |       |      |       |      |
|      |              |         |      |       | 500      | 600          | 0.24    | 100    | -9800  | -9700  |       |      |       |      |
|      |              |         |      |       | 400      | 500          | 0.12    | -100   | -10450 | -10550 |       |      |       |      |
|      |              |         |      |       | 320      | 400          | 0.05    | -300   | -11000 | -11300 |       |      |       |      |
|      |              |         |      |       | 320      | 1960         | 47.82   | 1747   | -3146  | -1399  |       |      |       |      |
|      |              |         |      |       | 54.2     | NIGARDSBREEN | NO31014 | 2007   | 1900   | 1960   | 0.38  | 3790 | -1300 | 2490 |
|      |              |         |      |       |          |              |         |        | 1800   | 1900   | 3.92  | 3820 | -1450 | 2370 |
|      |              |         |      |       |          |              |         |        | 1700   | 1800   | 9.39  | 3500 | -1600 | 1900 |
|      |              |         |      |       |          |              |         |        | 1600   | 1700   | 12.88 | 3300 | -1750 | 1550 |
| 1500 | 1600         | 9.18    | 3100 | -1900 |          |              |         |        | 1200   |        |       |      |       |      |
| 1400 | 1500         | 5.82    | 2950 | -2150 |          |              |         |        | 800    |        |       |      |       |      |
| 1300 | 1400         | 2.28    | 2750 | -2500 |          |              |         |        | 250    |        |       |      |       |      |
| 1200 | 1300         | 0.9     | 2350 | -2950 |          |              |         |        | -600   |        |       |      |       |      |
| 1100 | 1200         | 0.45    | 1850 | -3450 |          |              |         |        | -1600  |        |       |      |       |      |
| 1000 | 1100         | 0.58    | 1350 | -4000 |          |              |         |        | -2650  |        |       |      |       |      |
| 900  | 1000         | 0.47    | 850  | -4600 |          |              |         |        | -3750  |        |       |      |       |      |
| 800  | 900          | 0.44    | 500  | -5200 |          |              |         |        | -4700  |        |       |      |       |      |
| 700  | 800          | 0.33    | 200  | -5800 |          |              |         |        | -5600  |        |       |      |       |      |
| 600  | 700          | 0.39    | -50  | -6400 |          |              |         |        | -6450  |        |       |      |       |      |
| 500  | 600          | 0.24    | -350 | -7050 |          |              |         |        | -7400  |        |       |      |       |      |
| 400  | 500          | 0.12    | -600 | -7600 |          |              |         |        | -8200  |        |       |      |       |      |
| 320  | 400          | 0.05    | -850 | -8150 |          |              |         |        | -9000  |        |       |      |       |      |
| 320  | 1960         | 47.82   | 3092 | -2045 | 1047     |              |         |        |        |        |       |      |       |      |
| 54.3 | NIGARDSBREEN | NO31014 | 2008 | 1900  | 1960     | 0.38         | 3400    | -1000  | 2400   |        |       |      |       |      |
|      |              |         |      | 1800  | 1900     | 3.92         | 3300    | -1100  | 2200   |        |       |      |       |      |
|      |              |         |      | 1700  | 1800     | 9.39         | 3200    | -1250  | 1950   |        |       |      |       |      |
|      |              |         |      | 1600  | 1700     | 12.88        | 3180    | -1500  | 1680   |        |       |      |       |      |
|      |              |         |      | 1500  | 1600     | 9.18         | 3150    | -1800  | 1350   |        |       |      |       |      |
|      |              |         |      | 1400  | 1500     | 5.82         | 3050    | -2150  | 900    |        |       |      |       |      |
|      |              |         |      | 1300  | 1400     | 2.28         | 2750    | -2550  | 200    |        |       |      |       |      |
|      |              |         |      | 1200  | 1300     | 0.9          | 2400    | -3050  | -650   |        |       |      |       |      |
|      |              |         |      | 1100  | 1200     | 0.45         | 2050    | -3600  | -1550  |        |       |      |       |      |
|      |              |         |      | 1000  | 1100     | 0.58         | 1750    | -4200  | -2450  |        |       |      |       |      |
|      |              |         |      | 900   | 1000     | 0.47         | 1450    | -4900  | -3450  |        |       |      |       |      |
|      |              |         |      | 800   | 900      | 0.44         | 1200    | -5800  | -4600  |        |       |      |       |      |
|      |              |         |      | 700   | 800      | 0.33         | 950     | -6850  | -5900  |        |       |      |       |      |
|      |              |         |      | 600   | 700      | 0.39         | 700     | -8000  | -7300  |        |       |      |       |      |
|      |              |         |      | 500   | 600      | 0.24         | 450     | -9250  | -8800  |        |       |      |       |      |
|      |              |         |      | 400   | 500      | 0.12         | 200     | -10450 | -10250 |        |       |      |       |      |
|      |              |         |      | 320   | 400      | 0.05         | 50      | -11550 | -11500 |        |       |      |       |      |
| 320  | 1960         | 47.82   | 3010 | -1920 | 1100     |              |         |        |        |        |       |      |       |      |
| 54.4 | NIGARDSBREEN | NO31014 | 2009 | 1900  | 1957     | 0.31         | 2150    | -950   | 1200   |        |       |      |       |      |
|      |              |         |      | 1800  | 1900     | 4.06         | 2580    | -1110  | 1470   |        |       |      |       |      |
|      |              |         |      | 1700  | 1800     | 9.19         | 2400    | -1330  | 1070   |        |       |      |       |      |
|      |              |         |      | 1600  | 1700     | 12.74        | 2380    | -1550  | 830    |        |       |      |       |      |
|      |              |         |      | 1500  | 1600     | 8.94         | 2230    | -1800  | 430    |        |       |      |       |      |
|      |              |         |      | 1400  | 1500     | 5.92         | 2080    | -2150  | -70    |        |       |      |       |      |
|      |              |         |      | 1300  | 1400     | 2.08         | 1900    | -2550  | -650   |        |       |      |       |      |
|      |              |         |      | 1200  | 1300     | 0.79         | 1800    | -3080  | -1280  |        |       |      |       |      |
|      |              |         |      | 1100  | 1200     | 0.39         | 1700    | -3700  | -2000  |        |       |      |       |      |

| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS  | ALTITUDE |       | AREA  | BW    | BS     | BA     |
|------|-----------------|---------|------|------|----------|-------|-------|-------|--------|--------|
|      |                 |         |      |      | FROM     | TO    | KM²   | MM    | MM     | MM     |
| 54.5 | NIGARDSBREEN    | NO31014 | 2010 |      | 1000     | 1100  | 0.58  | 1550  | -4350  | -2800  |
|      |                 |         |      |      | 900      | 1000  | 0.46  | 1330  | -5130  | -3800  |
|      |                 |         |      |      | 800      | 900   | 0.47  | 1080  | -5950  | -4870  |
|      |                 |         |      |      | 700      | 800   | 0.32  | 750   | -6850  | -6100  |
|      |                 |         |      |      | 600      | 700   | 0.41  | 350   | -7750  | -7400  |
|      |                 |         |      |      | 500      | 600   | 0.26  | -50   | -8650  | -8700  |
|      |                 |         |      |      | 400      | 500   | 0.16  | -550  | -9650  | -10200 |
|      |                 |         |      |      | 315      | 400   | 0.09  | -1050 | -10550 | -11600 |
|      |                 |         |      |      | 315      | 1957  | 47.16 | 2200  | -1960  | 240    |
|      |                 |         |      |      | 1900     | 1957  | 0.31  | 1780  | -1500  | 280    |
|      |                 |         |      |      | 1800     | 1900  | 4.06  | 1800  | -1600  | 200    |
|      |                 |         |      |      | 1700     | 1800  | 9.19  | 1700  | -1750  | -50    |
|      |                 |         |      |      | 1600     | 1700  | 12.74 | 1600  | -1930  | -330   |
|      |                 |         |      |      | 1500     | 1600  | 8.94  | 1450  | -2200  | -750   |
|      |                 |         |      |      | 1400     | 1500  | 5.92  | 1350  | -2530  | -1180  |
|      |                 |         |      |      | 1300     | 1400  | 2.08  | 1280  | -2900  | -1620  |
|      |                 |         |      |      | 1200     | 1300  | 0.79  | 1150  | -3300  | -2150  |
|      |                 |         |      |      | 1100     | 1200  | 0.39  | 1000  | -3750  | -2750  |
|      |                 |         |      |      | 1000     | 1100  | 0.58  | 830   | -4200  | -3370  |
| 55.1 | REMBESDALSKAAGA | NO22303 | 2006 |      | 900      | 1000  | 0.46  | 600   | -4700  | -4100  |
|      |                 |         |      |      | 800      | 900   | 0.47  | 400   | -5180  | -4780  |
|      |                 |         |      |      | 700      | 800   | 0.32  | 150   | -5680  | -5530  |
|      |                 |         |      |      | 600      | 700   | 0.41  | -80   | -6180  | -6260  |
|      |                 |         |      |      | 500      | 600   | 0.26  | -330  | -6700  | -7030  |
|      |                 |         |      |      | 400      | 500   | 0.16  | -580  | -7250  | -7830  |
|      |                 |         |      |      | 315      | 400   | 0.09  | -800  | -7780  | -8580  |
|      |                 |         |      |      | 315      | 1957  | 47.16 | 1470  | -2270  | -800   |
|      |                 |         |      |      | 1850     | 1865  | 0.09  | 950   | -2450  | -1500  |
|      |                 |         |      |      | 1800     | 1850  | 3.93  | 1180  | -2500  | -1320  |
|      |                 |         |      |      | 1750     | 1800  | 4.03  | 1200  | -2550  | -1350  |
|      |                 |         |      |      | 1700     | 1750  | 3.46  | 1020  | -2650  | -1630  |
|      |                 |         |      |      | 1650     | 1700  | 1.94  | 840   | -3000  | -2160  |
|      |                 |         |      |      | 1600     | 1650  | 0.75  | 710   | -3500  | -2790  |
|      |                 |         |      |      | 1550     | 1600  | 0.59  | 430   | -4100  | -3670  |
|      |                 |         |      |      | 1500     | 1550  | 0.57  | 300   | -4600  | -4300  |
|      |                 |         |      |      | 1450     | 1500  | 0.29  | 220   | -4900  | -4680  |
|      |                 |         |      |      | 1400     | 1450  | 0.19  | 130   | -5250  | -5120  |
|      |                 |         |      |      | 1350     | 1400  | 0.1   | 30    | -5500  | -5470  |
| 55.2 | REMBESDALSKAAGA | NO22303 | 2007 |      | 1300     | 1350  | 0.1   | -70   | -5750  | -5820  |
|      |                 |         |      |      | 1250     | 1300  | 0.27  | -180  | -6000  | -6180  |
|      |                 |         |      |      | 1200     | 1250  | 0.36  | -300  | -6300  | -6600  |
|      |                 |         |      |      | 1150     | 1200  | 0.28  | -420  | -6600  | -7020  |
|      |                 |         |      |      | 1100     | 1150  | 0.11  | -540  | -7000  | -7540  |
|      |                 |         |      |      | 1020     | 1100  | 0.05  | -700  | -7500  | -8200  |
|      |                 |         |      |      | 1020     | 1865  | 17.1  | 900   | -3120  | -2220  |
|      |                 |         |      |      | 1850     | 1865  | 0.09  | 2700  | -1450  | 1250   |
|      |                 |         |      |      | 1800     | 1850  | 3.93  | 3450  | -1500  | 1950   |
|      |                 |         |      |      | 1750     | 1800  | 4.03  | 3600  | -1600  | 2000   |
|      |                 |         |      |      | 1700     | 1750  | 3.46  | 3500  | -1750  | 1750   |
|      |                 |         |      |      | 1650     | 1700  | 1.94  | 3200  | -1900  | 1300   |
|      |                 |         |      |      | 1600     | 1650  | 0.75  | 2700  | -2100  | 600    |
|      |                 |         |      |      | 1550     | 1600  | 0.59  | 2350  | -2300  | 50     |
|      |                 |         |      |      | 1500     | 1550  | 0.57  | 1950  | -2500  | -550   |
|      |                 |         |      |      | 1450     | 1500  | 0.29  | 1730  | -2700  | -970   |
|      |                 |         |      |      | 1400     | 1450  | 0.19  | 1560  | -2950  | -1390  |
|      |                 |         |      |      | 1350     | 1400  | 0.1   | 1390  | -3200  | -1810  |
|      |                 |         |      |      | 1300     | 1350  | 0.1   | 1220  | -3450  | -2230  |
|      | 1250            | 1300    | 0.27 | 1050 | -3700    | -2650 |       |       |        |        |



| NR   | GLACIER NAME     | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA | BW   | BS    | BA    |
|------|------------------|---------|------|-----|----------|------|------|------|-------|-------|
|      |                  |         |      |     | FROM     | TO   | KM²  | MM   | MM    | MM    |
|      |                  |         |      |     | 1200     | 1250 | 0.36 | 800  | -3950 | -3150 |
|      |                  |         |      |     | 1150     | 1200 | 0.28 | 550  | -4250 | -3700 |
|      |                  |         |      |     | 1100     | 1150 | 0.11 | 300  | -4550 | -4250 |
|      |                  |         |      |     | 1020     | 1100 | 0.05 | -50  | -4900 | -4950 |
|      |                  |         |      |     | 1020     | 1865 | 17.1 | 3100 | -1930 | 1170  |
|      |                  |         |      |     | 1850     | 1865 | 0.09 | 2250 | -1600 | 650   |
|      |                  |         |      |     | 1800     | 1850 | 3.93 | 2900 | -1650 | 1250  |
|      |                  |         |      |     | 1750     | 1800 | 4.03 | 3050 | -1700 | 1350  |
|      |                  |         |      |     | 1700     | 1750 | 3.46 | 2900 | -1750 | 1150  |
|      |                  |         |      |     | 1650     | 1700 | 1.94 | 2700 | -1800 | 900   |
| 55.3 | REMBESDALSKA AKA | NO22303 | 2008 |     | 1600     | 1650 | 0.75 | 2500 | -2200 | 300   |
|      |                  |         |      |     | 1550     | 1600 | 0.59 | 2000 | -2600 | -600  |
|      |                  |         |      |     | 1500     | 1550 | 0.57 | 1500 | -3050 | -1550 |
|      |                  |         |      |     | 1450     | 1500 | 0.29 | 1300 | -3500 | -2200 |
|      |                  |         |      |     | 1400     | 1450 | 0.19 | 1200 | -3950 | -2750 |
|      |                  |         |      |     | 1350     | 1400 | 0.1  | 1050 | -4400 | -3350 |
|      |                  |         |      |     | 1300     | 1350 | 0.1  | 900  | -4850 | -3950 |
|      |                  |         |      |     | 1250     | 1300 | 0.27 | 800  | -5300 | -4500 |
|      |                  |         |      |     | 1200     | 1250 | 0.36 | 750  | -5750 | -5000 |
|      |                  |         |      |     | 1150     | 1200 | 0.28 | 700  | -6200 | -5500 |
|      |                  |         |      |     | 1100     | 1150 | 0.11 | 650  | -6650 | -6000 |
|      |                  |         |      |     | 1020     | 1100 | 0.05 | 500  | -7200 | -6700 |
|      |                  |         |      |     | 1020     | 1865 | 17.1 | 2610 | -2160 | 450   |
| 55.4 | REMBESDALSKA AKA | NO22303 | 2009 |     | 1850     | 1865 | 0.09 | 2400 | -1600 | 800   |
|      |                  |         |      |     | 1800     | 1850 | 3.93 | 2600 | -1650 | 950   |
|      |                  |         |      |     | 1750     | 1800 | 4.03 | 2900 | -1800 | 1100  |
|      |                  |         |      |     | 1700     | 1750 | 3.46 | 2650 | -1950 | 700   |
|      |                  |         |      |     | 1650     | 1700 | 1.94 | 2300 | -2100 | 200   |
|      |                  |         |      |     | 1600     | 1650 | 0.75 | 2100 | -2400 | -300  |
|      |                  |         |      |     | 1550     | 1600 | 0.59 | 1800 | -2700 | -900  |
|      |                  |         |      |     | 1500     | 1550 | 0.57 | 1500 | -3000 | -1500 |
|      |                  |         |      |     | 1450     | 1500 | 0.29 | 1300 | -3300 | -2000 |
|      |                  |         |      |     | 1400     | 1450 | 0.19 | 1150 | -3600 | -2450 |
|      |                  |         |      |     | 1350     | 1400 | 0.1  | 1000 | -3900 | -2900 |
|      |                  |         |      |     | 1300     | 1350 | 0.1  | 850  | -4300 | -3450 |
|      |                  |         |      |     | 1250     | 1300 | 0.27 | 700  | -4700 | -4000 |
|      |                  |         |      |     | 1200     | 1250 | 0.36 | 500  | -5100 | -4600 |
|      |                  |         |      |     | 1150     | 1200 | 0.28 | 300  | -5500 | -5200 |
|      |                  |         |      |     | 1100     | 1150 | 0.11 | 100  | -5900 | -5800 |
|      |                  |         |      |     | 1020     | 1100 | 0.05 | -100 | -6500 | -6600 |
|      |                  |         |      |     | 1020     | 1865 | 17.1 | 2370 | -2210 | 150   |
| 55.5 | REMBESDALSKA AKA | NO22303 | 2010 |     | 1850     | 1854 | 0.03 | 1450 | -2200 | -750  |
|      |                  |         |      |     | 1800     | 1850 | 3.21 | 1500 | -2250 | -750  |
|      |                  |         |      |     | 1750     | 1800 | 3.99 | 1550 | -2300 | -750  |
|      |                  |         |      |     | 1700     | 1750 | 4.05 | 1400 | -2500 | -1100 |
|      |                  |         |      |     | 1650     | 1700 | 2.28 | 1300 | -2900 | -1600 |
|      |                  |         |      |     | 1600     | 1650 | 0.96 | 1050 | -3200 | -2150 |
|      |                  |         |      |     | 1550     | 1600 | 0.55 | 850  | -3400 | -2550 |
|      |                  |         |      |     | 1500     | 1550 | 0.53 | 650  | -3600 | -2950 |
|      |                  |         |      |     | 1450     | 1500 | 0.34 | 550  | -3800 | -3250 |
|      |                  |         |      |     | 1400     | 1450 | 0.2  | 500  | -4050 | -3550 |
|      |                  |         |      |     | 1350     | 1400 | 0.11 | 450  | -4300 | -3850 |
|      |                  |         |      |     | 1300     | 1350 | 0.07 | 400  | -4550 | -4150 |
|      |                  |         |      |     | 1250     | 1300 | 0.2  | 350  | -4800 | -4450 |
|      |                  |         |      |     | 1200     | 1250 | 0.26 | 300  | -5100 | -4800 |
|      |                  |         |      |     | 1150     | 1200 | 0.33 | 250  | -5400 | -5150 |
|      |                  |         |      |     | 1100     | 1150 | 0.14 | 200  | -5750 | -5550 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 56.1 | STORBREEN    | NO0541  | 2006 |     | 1066     | 1100 | 0.01  | 150  | -6200 | -6050 |
|      |              |         |      |     | 1066     | 1854 | 17.26 | 1280 | -2780 | -1490 |
|      |              |         |      |     | 2050     | 2100 | 0.04  | 1300 | -2000 | -700  |
|      |              |         |      |     | 2000     | 2050 | 0.15  | 1300 | -2200 | -900  |
|      |              |         |      |     | 1950     | 2000 | 0.23  | 1320 | -2400 | -1080 |
|      |              |         |      |     | 1900     | 1950 | 0.36  | 1340 | -2600 | -1260 |
|      |              |         |      |     | 1850     | 1900 | 0.57  | 1090 | -2700 | -1610 |
|      |              |         |      |     | 1800     | 1850 | 0.92  | 900  | -2900 | -2000 |
|      |              |         |      |     | 1750     | 1800 | 0.75  | 930  | -3000 | -2070 |
|      |              |         |      |     | 1700     | 1750 | 0.64  | 760  | -3150 | -2390 |
|      |              |         |      |     | 1650     | 1700 | 0.4   | 820  | -3200 | -2380 |
|      |              |         |      |     | 1600     | 1650 | 0.49  | 820  | -3300 | -2480 |
|      |              |         |      |     | 1550     | 1600 | 0.35  | 550  | -3400 | -2850 |
|      |              |         |      |     | 1500     | 1550 | 0.21  | 170  | -3600 | -3430 |
|      |              |         |      |     | 1450     | 1500 | 0.18  | 0    | -3700 | -3700 |
|      |              |         |      |     | 1390     | 1450 | 0.06  | 0    | -3800 | -3800 |
|      |              |         |      |     | 1390     | 2100 | 5.35  | 860  | -3010 | -2150 |
| 56.2 | STORBREEN    | NO0541  | 2007 |     | 2050     | 2100 | 0.04  | 1690 | -780  | 910   |
|      |              |         |      |     | 2000     | 2050 | 0.15  | 1690 | -980  | 710   |
|      |              |         |      |     | 1950     | 2000 | 0.23  | 1700 | -1150 | 550   |
|      |              |         |      |     | 1900     | 1950 | 0.36  | 1720 | -1300 | 420   |
|      |              |         |      |     | 1850     | 1900 | 0.57  | 1710 | -1440 | 270   |
|      |              |         |      |     | 1800     | 1850 | 0.92  | 1490 | -1570 | -80   |
|      |              |         |      |     | 1750     | 1800 | 0.75  | 1670 | -1720 | -50   |
|      |              |         |      |     | 1700     | 1750 | 0.64  | 1160 | -1870 | -710  |
|      |              |         |      |     | 1650     | 1700 | 0.4   | 1070 | -1990 | -920  |
|      |              |         |      |     | 1600     | 1650 | 0.49  | 1010 | -2100 | -1090 |
|      |              |         |      |     | 1550     | 1600 | 0.35  | 860  | -2200 | -1340 |
|      |              |         |      |     | 1500     | 1550 | 0.21  | 670  | -2300 | -1630 |
|      |              |         |      |     | 1450     | 1500 | 0.18  | 720  | -2400 | -1680 |
|      |              |         |      |     | 1390     | 1450 | 0.06  | 1100 | -2500 | -1400 |
|      |              |         |      |     | 1390     | 2100 | 5.4   | 1350 | -1740 | -390  |
| 56.3 | STORBREEN    | NO0541  | 2008 |     | 2050     | 2100 | 0.04  | 2600 | -500  | 2100  |
|      |              |         |      |     | 2000     | 2050 | 0.15  | 2670 | -650  | 2020  |
|      |              |         |      |     | 1950     | 2000 | 0.23  | 2750 | -800  | 1950  |
|      |              |         |      |     | 1900     | 1950 | 0.36  | 2830 | -1000 | 1830  |
|      |              |         |      |     | 1850     | 1900 | 0.57  | 2450 | -1250 | 1200  |
|      |              |         |      |     | 1800     | 1850 | 0.92  | 2030 | -1650 | 380   |
|      |              |         |      |     | 1750     | 1800 | 0.75  | 2970 | 1900  | 70    |
|      |              |         |      |     | 1700     | 1750 | 0.64  | 1720 | -2200 | -480  |
|      |              |         |      |     | 1650     | 1700 | 0.4   | 2000 | -2300 | -300  |
|      |              |         |      |     | 1600     | 1650 | 0.49  | 1770 | -2380 | -610  |
|      |              |         |      |     | 1550     | 1600 | 0.35  | 1400 | -2550 | -1150 |
|      |              |         |      |     | 1500     | 1550 | 0.21  | 1080 | -2800 | -1720 |
|      |              |         |      |     | 1450     | 1500 | 0.18  | 1100 | -3100 | -2000 |
|      |              |         |      |     | 1390     | 1450 | 0.06  | 1090 | -3390 | -2300 |
|      |              |         |      |     | 1390     | 2100 | 5.35  | 1990 | -1880 | 110   |
| 56.4 | STORBREEN    | NO0541  | 2009 |     | 2050     | 2102 | 0     | 3000 | -200  | 2800  |
|      |              |         |      |     | 2000     | 2050 | 0.09  | 2850 | -300  | 2550  |
|      |              |         |      |     | 1950     | 2000 | 0.18  | 2730 | -400  | 2330  |
|      |              |         |      |     | 1900     | 1950 | 0.29  | 2680 | -500  | 2180  |
|      |              |         |      |     | 1850     | 1900 | 0.34  | 2030 | -650  | 1380  |
|      |              |         |      |     | 1800     | 1850 | 0.75  | 1540 | -800  | 740   |
|      |              |         |      |     | 1750     | 1800 | 0.87  | 1510 | -1200 | 310   |
|      |              |         |      |     | 1700     | 1750 | 0.68  | 1410 | -2300 | -890  |
|      |              |         |      |     | 1650     | 1700 | 0.55  | 1440 | -2600 | -1160 |
|      |              |         |      |     | 1600     | 1650 | 0.31  | 1560 | -2800 | -1240 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |              |         |      |     | 1550     | 1600 | 0.49  | 1350 | -3000 | -1650 |
|      |              |         |      |     | 1500     | 1550 | 0.26  | 1140 | -3200 | -2060 |
|      |              |         |      |     | 1450     | 1500 | 0.18  | 960  | -3400 | -2440 |
|      |              |         |      |     | 1400     | 1450 | 0.13  | 1090 | -3600 | -2510 |
|      |              |         |      |     | 1400     | 2102 | 5.14  | 1600 | -1830 | -220  |
| 56.5 | STORBREEN    | NO0541  | 2010 |     | 2050     | 2102 | 0     | 10   | -1100 | -1090 |
|      |              |         |      |     | 2000     | 2050 | 0.09  | 140  | -1200 | -1060 |
|      |              |         |      |     | 1950     | 2000 | 0.18  | 220  | -1350 | -1130 |
|      |              |         |      |     | 1900     | 1950 | 0.29  | 380  | -1500 | -1120 |
|      |              |         |      |     | 1850     | 1900 | 0.34  | 370  | -1700 | -1330 |
|      |              |         |      |     | 1800     | 1850 | 0.75  | 610  | -2050 | -1440 |
|      |              |         |      |     | 1750     | 1800 | 0.87  | 650  | -2420 | -1770 |
|      |              |         |      |     | 1700     | 1750 | 0.68  | 470  | -2600 | -2130 |
|      |              |         |      |     | 1650     | 1700 | 0.55  | 400  | -2800 | -2400 |
|      |              |         |      |     | 1600     | 1650 | 0.31  | 240  | -3100 | -2860 |
|      |              |         |      |     | 1550     | 1600 | 0.49  | 320  | -3350 | -3030 |
|      |              |         |      |     | 1500     | 1550 | 0.26  | 140  | -3550 | -3410 |
|      |              |         |      |     | 1450     | 1500 | 0.18  | 70   | -3850 | -3780 |
|      |              |         |      |     | 1400     | 1450 | 0.13  | 50   | -4200 | -4150 |
|      |              |         |      |     | 1400     | 2102 | 5.14  | 790  | -2550 | -1760 |
| 57.1 | SVELGJABREEN | NO      | 2007 |     | 1600     | 1636 | 1.3   | 4750 | -1800 | 2950  |
|      |              |         |      |     | 1550     | 1600 | 1.87  | 4800 | -1850 | 2950  |
|      |              |         |      |     | 1500     | 1550 | 2.89  | 4750 | -1950 | 2800  |
|      |              |         |      |     | 1450     | 1500 | 2.13  | 4600 | -2050 | 2550  |
|      |              |         |      |     | 1400     | 1450 | 1.75  | 4400 | -2200 | 2200  |
|      |              |         |      |     | 1350     | 1400 | 2.73  | 4100 | -2350 | 1750  |
|      |              |         |      |     | 1300     | 1350 | 1.99  | 3800 | -2550 | 1250  |
|      |              |         |      |     | 1250     | 1300 | 1.47  | 3450 | -2750 | 700   |
|      |              |         |      |     | 1200     | 1250 | 1.57  | 3150 | -2950 | 200   |
|      |              |         |      |     | 1150     | 1200 | 1.47  | 2850 | -3200 | -350  |
|      |              |         |      |     | 1100     | 1150 | 1     | 2650 | -3450 | -800  |
|      |              |         |      |     | 1050     | 1100 | 1.16  | 2450 | -3750 | -1300 |
|      |              |         |      |     | 1000     | 1050 | 0.59  | 2300 | -4000 | -1700 |
|      |              |         |      |     | 950      | 1000 | 0.32  | 2150 | -4300 | -2150 |
|      |              |         |      |     | 900      | 950  | 0.14  | 2050 | -4600 | -2550 |
|      |              |         |      |     | 832      | 900  | 0.06  | 1950 | -5000 | -3050 |
|      |              |         |      |     | 832      | 1636 | 22.5  | 3890 | -2540 | 1350  |
| 57.2 | SVELGJABREEN | NO      | 2008 |     | 1600     | 1636 | 1.3   | 4050 | -1550 | 2500  |
|      |              |         |      |     | 1550     | 1600 | 1.87  | 3850 | -1700 | 2150  |
|      |              |         |      |     | 1500     | 1550 | 2.89  | 3750 | -1900 | 1850  |
|      |              |         |      |     | 1450     | 1500 | 2.13  | 3700 | -2100 | 1600  |
|      |              |         |      |     | 1400     | 1450 | 1.75  | 3650 | -2300 | 1350  |
|      |              |         |      |     | 1350     | 1400 | 2.73  | 3650 | -2500 | 1150  |
|      |              |         |      |     | 1300     | 1350 | 1.99  | 3500 | -2700 | 800   |
|      |              |         |      |     | 1250     | 1300 | 1.47  | 3350 | -2900 | 450   |
|      |              |         |      |     | 1200     | 1250 | 1.57  | 3050 | -3150 | -100  |
|      |              |         |      |     | 1150     | 1200 | 1.47  | 2750 | -3450 | -700  |
|      |              |         |      |     | 1100     | 1150 | 1     | 2550 | -3750 | -1200 |
|      |              |         |      |     | 1050     | 1100 | 1.16  | 2350 | -4100 | -1750 |
|      |              |         |      |     | 1000     | 1050 | 0.59  | 2150 | -4500 | -2350 |
|      |              |         |      |     | 950      | 1000 | 0.32  | 1950 | -4950 | -3000 |
|      |              |         |      |     | 900      | 950  | 0.14  | 1750 | -5350 | -3600 |
|      |              |         |      |     | 832      | 900  | 0.06  | 1500 | -5850 | -4350 |
|      |              |         |      |     | 832      | 1636 | 22.45 | 3650 | -2880 | 720   |
| 57.3 | SVELGJABREEN | NO      | 2009 |     | 1600     | 1650 | 1.3   | 4450 | -1850 | 2600  |
|      |              |         |      |     | 1550     | 1600 | 1.87  | 4350 | -2000 | 2350  |
|      |              |         |      |     | 1500     | 1550 | 2.89  | 4200 | -2150 | 2050  |

| NR   | GLACIER NAME  | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|---------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |               |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |               |         |      |     | 1450     | 1500 | 2.13  | 4000 | -2350 | 1650  |
|      |               |         |      |     | 1400     | 1450 | 1.75  | 3750 | -2550 | 1200  |
|      |               |         |      |     | 1350     | 1400 | 2.73  | 3450 | -2780 | 670   |
|      |               |         |      |     | 1300     | 1350 | 1.99  | 3150 | -3000 | 150   |
|      |               |         |      |     | 1250     | 1300 | 1.47  | 2850 | -3250 | -400  |
|      |               |         |      |     | 1200     | 1250 | 1.57  | 2600 | -3530 | -930  |
|      |               |         |      |     | 1150     | 1200 | 1.47  | 2350 | -3800 | -1450 |
|      |               |         |      |     | 1100     | 1150 | 1     | 2150 | -4150 | -2000 |
|      |               |         |      |     | 1050     | 1100 | 1.16  | 1950 | -4550 | -2600 |
|      |               |         |      |     | 1000     | 1050 | 0.59  | 1750 | -5000 | -3250 |
|      |               |         |      |     | 950      | 1000 | 0.32  | 1600 | -5500 | -3900 |
|      |               |         |      |     | 900      | 950  | 0.14  | 1400 | -6030 | -4630 |
|      |               |         |      |     | 832      | 900  | 0.06  | 1200 | -6650 | -5450 |
|      |               |         |      |     | 832      | 1650 | 22.45 | 3330 | -2970 | 360   |
| 57.4 | SVELGJABREEN  | NO      | 2010 |     | 1600     | 1636 | 1.3   | 1830 | -2530 | -700  |
|      |               |         |      |     | 1550     | 1600 | 1.87  | 1880 | -2650 | -770  |
|      |               |         |      |     | 1500     | 1550 | 2.89  | 1880 | -2800 | -920  |
|      |               |         |      |     | 1450     | 1500 | 2.13  | 1880 | -2950 | -1070 |
|      |               |         |      |     | 1400     | 1450 | 1.75  | 1850 | -3050 | -1200 |
|      |               |         |      |     | 1350     | 1400 | 2.73  | 1800 | -3200 | -1400 |
|      |               |         |      |     | 1300     | 1350 | 1.99  | 1680 | -3380 | -1700 |
|      |               |         |      |     | 1250     | 1300 | 1.47  | 1580 | -3550 | -1970 |
|      |               |         |      |     | 1200     | 1250 | 1.57  | 1450 | -3730 | -2280 |
|      |               |         |      |     | 1150     | 1200 | 1.47  | 1350 | -3880 | -2530 |
|      |               |         |      |     | 1100     | 1150 | 1     | 1250 | -4030 | -2780 |
|      |               |         |      |     | 1050     | 1100 | 1.16  | 1150 | -4150 | -3000 |
|      |               |         |      |     | 1000     | 1050 | 0.59  | 1100 | -4300 | -3200 |
|      |               |         |      |     | 950      | 1000 | 0.32  | 1000 | -4450 | -3450 |
|      |               |         |      |     | 900      | 950  | 0.14  | 780  | -4600 | -3820 |
|      |               |         |      |     | 832      | 900  | 0.06  | 500  | -4750 | -4250 |
|      |               |         |      |     | 832      | 1636 | 22.45 | 1650 | -3290 | -1640 |
| 58.1 | WALDEMARBREEN | NO15403 | 2008 |     | 500      | 550  | 0     |      |       | 593   |
|      |               |         |      |     | 450      | 500  | 0     |      |       | 518   |
|      |               |         |      |     | 400      | 450  | 0     |      |       | 168   |
|      |               |         |      |     | 350      | 400  | 0     |      |       | 98    |
|      |               |         |      |     | 300      | 350  | 0     |      |       | -185  |
|      |               |         |      |     | 250      | 300  | 0     |      |       | -401  |
|      |               |         |      |     | 200      | 250  | 0     |      |       | -831  |
|      |               |         |      |     | 150      | 200  | 0     |      |       | -1263 |
|      |               |         |      |     | 150      | 550  | 0     |      |       | -322  |
| 58.2 | WALDEMARBREEN | NO15403 | 2009 |     | 500      | 550  | 0     |      |       | 635   |
|      |               |         |      |     | 450      | 500  | 0     |      |       | 519   |
|      |               |         |      |     | 400      | 450  | 0     |      |       | 73    |
|      |               |         |      |     | 350      | 400  | 0     |      |       | -352  |
|      |               |         |      |     | 300      | 350  | 0     |      |       | -574  |
|      |               |         |      |     | 250      | 300  | 0     |      |       | -767  |
|      |               |         |      |     | 200      | 250  | 0     |      |       | -1198 |
|      |               |         |      |     | 150      | 200  | 0     |      |       | -2094 |
|      |               |         |      |     | 150      | 550  | 2.5   |      |       | -649  |
|      | <u>PERU</u>   |         |      |     |          |      |       |      |       |       |
| 59.1 | ARTESONRAJU   | PE0003  | 2006 |     | 4900     | 5600 | 2.308 |      |       | 7     |
|      |               |         |      |     | 4875     | 4900 | 0.076 |      |       | -64   |
|      |               |         |      |     | 4850     | 4875 | 0.088 |      |       | -87   |
|      |               |         |      |     | 4825     | 4850 | 0.167 |      |       | -265  |
|      |               |         |      |     | 4800     | 4825 | 0.134 |      |       | -248  |
|      |               |         |      |     | 4775     | 4800 | 0.185 |      |       | -396  |
|      |               |         |      |     | 4750     | 4775 | 0.134 |      |       | -316  |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW | BS | BA    |
|------|--------------|---------|------|-----|----------|------|-------|----|----|-------|
|      |              |         |      |     | FROM     | TO   |       |    |    |       |
|      |              |         |      |     |          |      | KM²   | MM | MM | MM    |
|      |              |         |      |     | 4725     | 4750 | 0.095 |    |    | -246  |
|      |              |         |      |     | 4700     | 4725 | 0.021 |    |    | -62   |
|      |              |         |      |     | 4700     | 5600 | 3.208 |    |    | -1679 |
| 59.2 | ARTESONRAJU  | PE0003  | 2007 |     | 4925     | 5600 | 2.156 |    |    | 235   |
|      |              |         |      |     | 4900     | 4925 | 0.103 |    |    | -60   |
|      |              |         |      |     | 4875     | 4900 | 0.116 |    |    | -86   |
|      |              |         |      |     | 4850     | 4875 | 0.117 |    |    | -117  |
|      |              |         |      |     | 4825     | 4850 | 0.174 |    |    | -243  |
|      |              |         |      |     | 4800     | 4825 | 0.151 |    |    | -272  |
|      |              |         |      |     | 4775     | 4800 | 0.154 |    |    | -328  |
|      |              |         |      |     | 4750     | 4775 | 0.123 |    |    | -295  |
|      |              |         |      |     | 4725     | 4750 | 0.096 |    |    | -258  |
|      |              |         |      |     | 4700     | 4725 | 0.033 |    |    | -99   |
|      |              |         |      |     | 4700     | 5600 | 3.223 |    |    | -1522 |
| 59.3 | ARTESONRAJU  | PE0003  | 2008 |     | 5075     | 5600 | 1.506 |    |    | 1169  |
|      |              |         |      |     | 5000     | 5075 | 0.434 |    |    | 270   |
|      |              |         |      |     | 4975     | 5000 | 0.088 |    |    | 34    |
|      |              |         |      |     | 4950     | 4975 | 0.09  |    |    | 17    |
|      |              |         |      |     | 4925     | 4950 | 0.078 |    |    | -4    |
|      |              |         |      |     | 4900     | 4925 | 0.089 |    |    | -24   |
|      |              |         |      |     | 4875     | 4900 | 0.1   |    |    | -29   |
|      |              |         |      |     | 4850     | 4875 | 0.111 |    |    | -56   |
|      |              |         |      |     | 4825     | 4850 | 0.173 |    |    | -125  |
|      |              |         |      |     | 4800     | 4825 | 0.15  |    |    | -138  |
|      |              |         |      |     | 4775     | 4800 | 0.154 |    |    | -182  |
|      |              |         |      |     | 4750     | 4775 | 0.123 |    |    | -218  |
|      |              |         |      |     | 4725     | 4750 | 0.096 |    |    | -177  |
|      |              |         |      |     | 4700     | 4725 | 0.033 |    |    | -67   |
|      |              |         |      |     | 4700     | 5600 | 3.223 |    |    | 471   |
| 59.4 | ARTESONRAJU  | PE0003  | 2009 |     | 5200     | 5500 | 1.047 |    |    | 305   |
|      |              |         |      |     | 5100     | 5200 | 0.39  |    |    | 12    |
|      |              |         |      |     | 5000     | 5100 | 0.357 |    |    | -48   |
|      |              |         |      |     | 4950     | 5000 | 0.179 |    |    | -34   |
|      |              |         |      |     | 4900     | 4950 | 0.168 |    |    | -27   |
|      |              |         |      |     | 4850     | 4900 | 0.207 |    |    | -84   |
|      |              |         |      |     | 4800     | 4850 | 0.295 |    |    | -191  |
|      |              |         |      |     | 4750     | 4800 | 0.293 |    |    | -397  |
|      |              |         |      |     | 4710     | 4750 | 0.112 |    |    | -194  |
|      |              |         |      |     | 4710     | 5500 | 3.05  |    |    | -658  |
| 59.5 | ARTESONRAJU  | PE0003  | 2010 |     | 5300     | 5350 | 0.216 |    |    | 61    |
|      |              |         |      |     | 5250     | 5300 | 0.456 |    |    | 187   |
|      |              |         |      |     | 5200     | 5250 | 0.492 |    |    | 192   |
|      |              |         |      |     | 5150     | 5200 | 0.326 |    |    | 150   |
|      |              |         |      |     | 5100     | 5150 | 0.367 |    |    | 140   |
|      |              |         |      |     | 5050     | 5100 | 0.451 |    |    | 145   |
|      |              |         |      |     | 5000     | 5050 | 0.289 |    |    | 51    |
|      |              |         |      |     | 4950     | 5000 | 0.304 |    |    | 34    |
|      |              |         |      |     | 4900     | 4950 | 0.252 |    |    | -19   |
|      |              |         |      |     | 4850     | 4900 | 0.274 |    |    | -99   |
|      |              |         |      |     | 4800     | 4850 | 0.271 |    |    | -189  |
|      |              |         |      |     | 4750     | 4800 | 0.266 |    |    | -275  |
|      |              |         |      |     | 4710     | 4750 | 0.138 |    |    | -182  |
|      |              |         |      |     | 4710     | 5350 | 4.102 |    |    | 49    |
| 60.1 | YANAMAREY    | PE0004  | 2006 |     | 4950     | 4975 | 0.003 |    |    | 23    |
|      |              |         |      |     | 4925     | 4950 | 0.013 |    |    | 63    |
|      |              |         |      |     | 4900     | 4925 | 0.021 |    |    | 40    |

| NR           | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|--------------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|              |              |         |      |     | FROM     | TO   |       |      |       |       |
|              |              |         |      |     |          |      | KM²   | MM   | MM    | MM    |
|              |              |         |      |     | 4875     | 4900 | 0.025 |      |       | 6     |
|              |              |         |      |     | 4850     | 4875 | 0.023 |      |       | -34   |
|              |              |         |      |     | 4825     | 4850 | 0.019 |      |       | -74   |
|              |              |         |      |     | 4800     | 4825 | 0.025 |      |       | -165  |
|              |              |         |      |     | 4775     | 4800 | 0.024 |      |       | -245  |
|              |              |         |      |     | 4750     | 4775 | 0.021 |      |       | -281  |
|              |              |         |      |     | 4725     | 4750 | 0.02  |      |       | -366  |
|              |              |         |      |     | 4700     | 4725 | 0.016 |      |       | -330  |
|              |              |         |      |     | 4675     | 4700 | 0.01  |      |       | -239  |
|              |              |         |      |     | 4650     | 4675 | 0.004 |      |       | -100  |
|              |              |         |      |     | 4625     | 4650 | 0     |      |       | -9    |
|              |              |         |      |     | 4625     | 4975 | 0.225 |      |       | -1712 |
| 60.2         | YANAMAREY    | PE0004  | 2007 |     | 4975     | 5150 | 0.002 |      |       | 11    |
|              |              |         |      |     | 4950     | 4975 | 0.01  |      |       | 41    |
|              |              |         |      |     | 4925     | 4950 | 0.021 |      |       | 18    |
|              |              |         |      |     | 4900     | 4925 | 0.026 |      |       | -4    |
|              |              |         |      |     | 4875     | 4900 | 0.021 |      |       | 13    |
|              |              |         |      |     | 4850     | 4875 | 0.02  |      |       | 5     |
|              |              |         |      |     | 4825     | 4850 | 0.017 |      |       | -55   |
|              |              |         |      |     | 4800     | 4825 | 0.021 |      |       | -167  |
|              |              |         |      |     | 4775     | 4800 | 0.017 |      |       | -216  |
|              |              |         |      |     | 4750     | 4775 | 0.011 |      |       | -214  |
|              |              |         |      |     | 4725     | 4750 | 0.014 |      |       | -314  |
|              |              |         |      |     | 4700     | 4725 | 0.015 |      |       | -334  |
|              |              |         |      |     | 4675     | 4700 | 0.009 |      |       | -231  |
|              |              |         |      |     | 4650     | 4675 | 0.003 |      |       | -79   |
|              |              |         |      |     | 4625     | 4650 | 0     |      |       | -6    |
|              |              |         |      |     | 4625     | 5150 | 0.206 |      |       | -1532 |
| 60.3         | YANAMAREY    | PE0004  | 2008 |     | 4883     | 5150 | 0.16  |      |       | 556   |
|              |              |         |      |     | 4825     | 4883 | 0.09  |      |       | 139   |
|              |              |         |      |     | 4800     | 4825 | 0.02  |      |       | -36   |
|              |              |         |      |     | 4775     | 4800 | 0.019 |      |       | -84   |
|              |              |         |      |     | 4750     | 4775 | 0.013 |      |       | -71   |
|              |              |         |      |     | 4725     | 4750 | 0.014 |      |       | -94   |
|              |              |         |      |     | 4700     | 4725 | 0.015 |      |       | -176  |
|              |              |         |      |     | 4675     | 4700 | 0.009 |      |       | -107  |
|              |              |         |      |     | 4640     | 4675 | 0.003 |      |       | -38   |
|              |              |         |      |     | 4640     | 5150 | 0.34  |      |       | 89    |
| 60.4         | YANAMAREY    | PE0004  | 2009 |     | 4925     | 4950 | 0.007 |      |       | 72    |
|              |              |         |      |     | 4900     | 4925 | 0.007 |      |       | 29    |
|              |              |         |      |     | 4875     | 4900 | 0.007 |      |       | 29    |
|              |              |         |      |     | 4850     | 4875 | 0.016 |      |       | 60    |
|              |              |         |      |     | 4825     | 4850 | 0.017 |      |       | 15    |
|              |              |         |      |     | 4800     | 4825 | 0.021 |      |       | -17   |
|              |              |         |      |     | 4775     | 4800 | 0.019 |      |       | -63   |
|              |              |         |      |     | 4750     | 4775 | 0.013 |      |       | -97   |
|              |              |         |      |     | 4725     | 4750 | 0.014 |      |       | -185  |
|              |              |         |      |     | 4700     | 4725 | 0.01  |      |       | -196  |
|              |              |         |      |     | 4675     | 4700 | 0.005 |      |       | -125  |
|              |              |         |      |     | 4650     | 4675 | 0.002 |      |       | -47   |
|              |              |         |      |     | 4650     | 4950 | 0.137 |      |       | -525  |
| <u>SPAIN</u> |              |         |      |     |          |      |       |      |       |       |
| 61.1         | MALADETA     | ES9020  | 2006 | FXD | 3125     | 3190 | 0.01  | 1553 | -1553 | 0     |
|              |              |         |      |     | 3050     | 3125 | 0.01  | 1446 | -3765 | -2319 |
|              |              |         |      |     | 2950     | 3050 | 0.083 | 1319 | -3456 | -2137 |
|              |              |         |      |     | 2875     | 2950 | 0.024 | 1131 | -4528 | -3397 |

| NR     | GLACIER NAME    | PSFG NR | YEAR | SYS   | ALTITUDE |          | AREA   | BW   | BS    | BA    |
|--------|-----------------|---------|------|-------|----------|----------|--------|------|-------|-------|
|        |                 |         |      |       | FROM     | TO       | KM²    | MM   | MM    | MM    |
| 61.2   | MALADETA        | ES9020  | 2007 | FXD   | 2775     | 2875     | 0.003  | 855  | -4959 | -4104 |
|        |                 |         |      |       | 2775     | 3190     | 0.313  | 1405 | -3192 | -1787 |
|        |                 |         |      |       | 3125     | 3190     | 0.093  | 1881 | -2364 | -483  |
|        |                 |         |      |       | 3050     | 3125     | 0.093  | 807  | -1326 | -519  |
|        |                 |         |      |       | 2950     | 3050     | 0.064  | 1248 | -2746 | -1498 |
|        |                 |         |      |       | 2875     | 2950     | 0.023  | 711  | -3180 | -2469 |
|        |                 |         |      |       | 2775     | 2875     | 0.003  | 518  | -3290 | -2772 |
|        |                 |         |      |       | 2775     | 3190     | 0.276  | 1221 | -2168 | -947  |
| 61.3   | MALADETA        | ES9020  | 2008 | FXD   | 3088     | 3213     | 0.137  | 4633 | -3875 | 758   |
|        |                 |         |      |       | 3063     | 3088     | 0.037  | 2325 | -2490 | -165  |
|        |                 |         |      |       | 3038     | 3063     | 0.037  | 2363 | -2586 | -223  |
|        |                 |         |      |       | 3013     | 3038     | 0.021  | 2401 | -2681 | -280  |
|        |                 |         |      |       | 2988     | 3013     | 0.016  | 2438 | -2776 | -338  |
|        |                 |         |      |       | 2963     | 2988     | 0.012  | 2301 | -2861 | -560  |
|        |                 |         |      |       | 2938     | 2963     | 0.01   | 2163 | -2946 | -783  |
|        |                 |         |      |       | 2913     | 2938     | 0.009  | 2026 | -3031 | -1005 |
|        |                 |         |      |       | 2888     | 2913     | 0.007  | 1888 | -3116 | -1227 |
|        |                 |         |      |       | 2863     | 2888     | 0.005  | 1925 | -3256 | -1331 |
|        |                 |         |      |       | 2838     | 2863     | 0.001  | 1961 | -3397 | -1436 |
|        |                 |         |      |       | 2838     | 3213     | 0.29   | 2934 | -2971 | -38   |
|        |                 |         |      |       | 61.4     | MALADETA | ES9020 | 2009 | FXD   | 3188  |
| 3163   | 3188            | 0.018   | 2639 | -3047 |          |          |        |      |       | -407  |
| 3138   | 3163            | 0.038   | 2639 | -3047 |          |          |        |      |       | -407  |
| 3113   | 3138            | 0.037   | 2113 | -2942 |          |          |        |      |       | -829  |
| 3088   | 3113            | 0.037   | 1587 | -2838 |          |          |        |      |       | -1251 |
| 3063   | 3088            | 0.037   | 1689 | -3190 |          |          |        |      |       | -1501 |
| 3038   | 3063            | 0.034   | 1790 | -3541 |          |          |        |      |       | -1751 |
| 3013   | 3038            | 0.018   | 1892 | -3893 |          |          |        |      |       | -2001 |
| 2988   | 3013            | 0.014   | 1994 | -4245 |          |          |        |      |       | -2251 |
| 2963   | 2988            | 0.011   | 1909 | -4328 |          |          |        |      |       | -2419 |
| 2938   | 2963            | 0.008   | 1825 | -4412 |          |          |        |      |       | -2587 |
| 2913   | 2938            | 0.008   | 1741 | -4495 |          |          |        |      |       | -2755 |
| 2888   | 2913            | 0.008   | 1656 | -4579 |          |          |        |      |       | -2923 |
| 2863   | 2888            | 0.003   | 1511 | -4422 |          |          |        |      |       | -2910 |
| 2838   | 2863            | 0.001   | 1367 | -4265 |          |          |        |      |       | -2898 |
| 2838   | 3213            | 0.276   | 1986 | -3401 | -1415    |          |        |      |       |       |
| 61.5   | MALADETA        | ES9020  | 2010 | FXD   | 3188     | 3213     | 0.003  | 3116 | -2756 | 360   |
|        |                 |         |      |       | 3163     | 3188     | 0.018  | 3116 | -2756 | 360   |
|        |                 |         |      |       | 3138     | 3163     | 0.04   | 3116 | -2756 | 360   |
|        |                 |         |      |       | 3113     | 3138     | 0.037  | 2648 | -2128 | 519   |
|        |                 |         |      |       | 3088     | 3113     | 0.037  | 2179 | -1500 | 679   |
|        |                 |         |      |       | 3063     | 3088     | 0.036  | 2249 | -1723 | 525   |
|        |                 |         |      |       | 3038     | 3063     | 0.034  | 2318 | -1946 | 372   |
|        |                 |         |      |       | 3013     | 3038     | 0.017  | 2388 | -2169 | 218   |
|        |                 |         |      |       | 2988     | 3013     | 0.014  | 2457 | -2392 | 65    |
|        |                 |         |      |       | 2963     | 2988     | 0.012  | 2404 | -2704 | -300  |
|        |                 |         |      |       | 2938     | 2963     | 0.008  | 2352 | -3016 | -664  |
|        |                 |         |      |       | 2913     | 2938     | 0.007  | 2299 | -3328 | -1029 |
|        |                 |         |      |       | 2888     | 2913     | 0.008  | 2246 | -3640 | -1394 |
|        |                 |         |      |       | 2863     | 2888     | 0.004  | 2088 | -2886 | -798  |
|        |                 |         |      |       | 2838     | 2863     | 0.001  | 1929 | -2132 | -203  |
| 2838   | 3213            | 0.28    | 2519 | -2260 | 259      |          |        |      |       |       |
| SWEDEN |                 |         |      |       |          |          |        |      |       |       |
| 62.1   | MARMAGLACIAEREN | SE0799  | 2006 |       | 1780     | 1800     | 0      | 2560 | -1460 | 1100  |
|        |                 |         |      |       | 1760     | 1780     | 0.004  | 2740 | -1390 | 1350  |
|        |                 |         |      |       | 1740     | 1760     | 0.018  | 2820 | -1380 | 1440  |

| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                 |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                 |         |      |     | 1720     | 1740 | 0.03  | 2760 | -1370 | 1400  |
|      |                 |         |      |     | 1700     | 1720 | 0.042 | 2570 | -1360 | 1210  |
|      |                 |         |      |     | 1680     | 1700 | 0.104 | 2260 | -1450 | 810   |
|      |                 |         |      |     | 1660     | 1680 | 0.206 | 1900 | -1360 | 540   |
|      |                 |         |      |     | 1640     | 1660 | 0.192 | 1310 | -1430 | -120  |
|      |                 |         |      |     | 1620     | 1640 | 0.315 | 910  | -1570 | -660  |
|      |                 |         |      |     | 1600     | 1620 | 0.322 | 780  | -1910 | -1130 |
|      |                 |         |      |     | 1580     | 1600 | 0.191 | 830  | -2280 | -1450 |
|      |                 |         |      |     | 1560     | 1580 | 0.229 | 820  | -2500 | -1680 |
|      |                 |         |      |     | 1540     | 1560 | 0.345 | 800  | -2650 | -1850 |
|      |                 |         |      |     | 1520     | 1540 | 0.365 | 810  | -2770 | -1970 |
|      |                 |         |      |     | 1500     | 1520 | 0.186 | 910  | -2930 | -2020 |
|      |                 |         |      |     | 1480     | 1500 | 0.198 | 820  | -3010 | -2200 |
|      |                 |         |      |     | 1460     | 1480 | 0.252 | 680  | -3160 | -2470 |
|      |                 |         |      |     | 1440     | 1460 | 0.218 | 660  | -3360 | -2710 |
|      |                 |         |      |     | 1420     | 1440 | 0.16  | 670  | -3570 | -2890 |
|      |                 |         |      |     | 1400     | 1420 | 0.15  | 700  | -3690 | -2990 |
|      |                 |         |      |     | 1380     | 1400 | 0.147 | 790  | -3760 | -2970 |
|      |                 |         |      |     | 1360     | 1380 | 0.144 | 880  | -3790 | -2910 |
|      |                 |         |      |     | 1340     | 1360 | 0.097 | 880  | -3800 | -2920 |
|      |                 |         |      |     | 1320     | 1340 | 0.051 | 890  | -3830 | -2940 |
|      |                 |         |      |     | 1320     | 1800 | 3.965 | 960  | -2610 | -1650 |
| 62.2 | MARMAGLACIAEREN | SE0799  | 2007 |     | 1780     | 1800 | 0     | 1690 | -920  | 770   |
|      |                 |         |      |     | 1760     | 1780 | 0.004 | 2020 | -960  | 1060  |
|      |                 |         |      |     | 1740     | 1760 | 0.018 | 1910 | -1000 | 910   |
|      |                 |         |      |     | 1720     | 1740 | 0.03  | 1860 | -1050 | 810   |
|      |                 |         |      |     | 1700     | 1720 | 0.042 | 1910 | -1100 | 810   |
|      |                 |         |      |     | 1680     | 1700 | 0.104 | 1990 | -1150 | 830   |
|      |                 |         |      |     | 1660     | 1680 | 0.206 | 1930 | -1200 | 730   |
|      |                 |         |      |     | 1640     | 1660 | 0.192 | 1460 | -1250 | 210   |
|      |                 |         |      |     | 1620     | 1640 | 0.315 | 990  | -1300 | -310  |
|      |                 |         |      |     | 1600     | 1620 | 0.322 | 640  | -1340 | -710  |
|      |                 |         |      |     | 1580     | 1600 | 0.191 | 630  | -1390 | -760  |
|      |                 |         |      |     | 1560     | 1580 | 0.229 | 680  | -1450 | -760  |
|      |                 |         |      |     | 1540     | 1560 | 0.345 | 780  | -1490 | -710  |
|      |                 |         |      |     | 1520     | 1540 | 0.365 | 870  | -1540 | -670  |
|      |                 |         |      |     | 1500     | 1520 | 0.186 | 890  | -1590 | -700  |
|      |                 |         |      |     | 1480     | 1500 | 0.198 | 780  | -1640 | -870  |
|      |                 |         |      |     | 1460     | 1480 | 0.252 | 680  | -1690 | -1010 |
|      |                 |         |      |     | 1440     | 1460 | 0.218 | 740  | -1740 | -990  |
|      |                 |         |      |     | 1420     | 1440 | 0.16  | 840  | -1790 | -950  |
|      |                 |         |      |     | 1400     | 1420 | 0.15  | 940  | -1840 | -890  |
|      |                 |         |      |     | 1380     | 1400 | 0.147 | 1090 | -1890 | -800  |
|      |                 |         |      |     | 1360     | 1380 | 0.144 | 1340 | -1930 | -600  |
|      |                 |         |      |     | 1340     | 1360 | 0.097 | 1480 | -1980 | -500  |
|      |                 |         |      |     | 1320     | 1340 | 0.051 | 1560 | -2020 | -460  |
|      |                 |         |      |     | 1320     | 1800 | 3.965 | 1000 | -1530 | -530  |
| 62.3 | MARMAGLACIAEREN | SE0799  | 2008 |     | 1780     | 1800 | 0     | 2200 | 90    | 2290  |
|      |                 |         |      |     | 1760     | 1780 | 0.004 | 2520 | 30    | 2550  |
|      |                 |         |      |     | 1740     | 1760 | 0.018 | 2430 | -60   | 2370  |
|      |                 |         |      |     | 1720     | 1740 | 0.03  | 2390 | -160  | 2230  |
|      |                 |         |      |     | 1700     | 1720 | 0.042 | 2440 | -250  | 2190  |
|      |                 |         |      |     | 1680     | 1700 | 0.104 | 2430 | -360  | 2070  |
|      |                 |         |      |     | 1660     | 1680 | 0.206 | 2360 | -450  | 1910  |
|      |                 |         |      |     | 1640     | 1660 | 0.192 | 2090 | -540  | 1550  |
|      |                 |         |      |     | 1620     | 1640 | 0.315 | 1600 | -640  | 960   |
|      |                 |         |      |     | 1600     | 1620 | 0.322 | 930  | -730  | 200   |
|      |                 |         |      |     | 1580     | 1600 | 0.191 | 750  | -830  | -80   |
|      |                 |         |      |     | 1560     | 1580 | 0.229 | 800  | -930  | -140  |



| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                 |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                 |         |      |     | 1540     | 1560 | 0.345 | 930  | -1030 | -100  |
|      |                 |         |      |     | 1520     | 1540 | 0.365 | 1090 | -1120 | -20   |
|      |                 |         |      |     | 1500     | 1520 | 0.186 | 1300 | -1220 | 80    |
|      |                 |         |      |     | 1480     | 1500 | 0.198 | 1150 | -1320 | -170  |
|      |                 |         |      |     | 1460     | 1480 | 0.252 | 940  | -1410 | -470  |
|      |                 |         |      |     | 1440     | 1460 | 0.218 | 910  | -1500 | -590  |
|      |                 |         |      |     | 1420     | 1440 | 0.16  | 970  | -1610 | -640  |
|      |                 |         |      |     | 1400     | 1420 | 0.15  | 910  | -1700 | -790  |
|      |                 |         |      |     | 1380     | 1400 | 0.147 | 880  | -1800 | -920  |
|      |                 |         |      |     | 1360     | 1380 | 0.144 | 890  | -1890 | -1010 |
|      |                 |         |      |     | 1340     | 1360 | 0.097 | 870  | -1990 | -1120 |
|      |                 |         |      |     | 1320     | 1340 | 0.051 | 870  | -2060 | -1190 |
|      |                 |         |      |     | 1320     | 1800 | 3.965 | 1210 | -1090 | 120   |
| 62.4 | MARMAGLACIAEREN | SE0799  | 2009 |     | 1780     | 1800 | 0     | 3480 | 360   | 3840  |
|      |                 |         |      |     | 1760     | 1780 | 0.004 | 4170 | 200   | 4370  |
|      |                 |         |      |     | 1740     | 1760 | 0.018 | 3630 | -10   | 3620  |
|      |                 |         |      |     | 1720     | 1740 | 0.03  | 3350 | -230  | 3130  |
|      |                 |         |      |     | 1700     | 1720 | 0.042 | 3380 | -450  | 2930  |
|      |                 |         |      |     | 1680     | 1700 | 0.104 | 2860 | -690  | 2170  |
|      |                 |         |      |     | 1660     | 1680 | 0.206 | 2150 | -900  | 1240  |
|      |                 |         |      |     | 1640     | 1660 | 0.192 | 1540 | -1120 | 420   |
|      |                 |         |      |     | 1620     | 1640 | 0.315 | 920  | -1350 | -430  |
|      |                 |         |      |     | 1600     | 1620 | 0.322 | 630  | -1550 | -930  |
|      |                 |         |      |     | 1580     | 1600 | 0.191 | 660  | -1780 | -1120 |
|      |                 |         |      |     | 1560     | 1580 | 0.229 | 640  | -2020 | -1380 |
|      |                 |         |      |     | 1540     | 1560 | 0.345 | 660  | -2240 | -1580 |
|      |                 |         |      |     | 1520     | 1540 | 0.365 | 660  | -2440 | -1780 |
|      |                 |         |      |     | 1500     | 1520 | 0.186 | 770  | -2680 | -1910 |
|      |                 |         |      |     | 1480     | 1500 | 0.198 | 800  | -2910 | -2110 |
|      |                 |         |      |     | 1460     | 1480 | 0.252 | 730  | -3140 | -2400 |
|      |                 |         |      |     | 1440     | 1460 | 0.218 | 690  | -3340 | -2650 |
|      |                 |         |      |     | 1420     | 1440 | 0.16  | 790  | -3580 | -2790 |
|      |                 |         |      |     | 1400     | 1420 | 0.15  | 880  | -3810 | -2930 |
|      |                 |         |      |     | 1380     | 1400 | 0.147 | 980  | -4030 | -3050 |
|      |                 |         |      |     | 1360     | 1380 | 0.144 | 1130 | -4250 | -3120 |
|      |                 |         |      |     | 1340     | 1360 | 0.097 | 1320 | -4470 | -3140 |
|      |                 |         |      |     | 1320     | 1340 | 0.051 | 1430 | -4640 | -3210 |
|      |                 |         |      |     | 1320     | 1800 | 3.965 | 1010 | -2400 | -1390 |
| 62.5 | MARMAGLACIAEREN | SE0799  | 2010 |     | 1780     | 1800 | 0     | 1420 | -650  | 770   |
|      |                 |         |      |     | 1760     | 1780 | 0.004 | 1460 | -690  | 770   |
|      |                 |         |      |     | 1740     | 1760 | 0.018 | 1420 | -740  | 670   |
|      |                 |         |      |     | 1720     | 1740 | 0.03  | 1390 | -790  | 600   |
|      |                 |         |      |     | 1700     | 1720 | 0.042 | 1390 | -840  | 550   |
|      |                 |         |      |     | 1680     | 1700 | 0.104 | 1440 | -900  | 540   |
|      |                 |         |      |     | 1660     | 1680 | 0.206 | 1330 | -950  | 380   |
|      |                 |         |      |     | 1640     | 1660 | 0.192 | 1190 | -1000 | 190   |
|      |                 |         |      |     | 1620     | 1640 | 0.315 | 970  | -1060 | -80   |
|      |                 |         |      |     | 1600     | 1620 | 0.322 | 870  | -1100 | -240  |
|      |                 |         |      |     | 1580     | 1600 | 0.191 | 800  | -1160 | -360  |
|      |                 |         |      |     | 1560     | 1580 | 0.229 | 770  | -1210 | -440  |
|      |                 |         |      |     | 1540     | 1560 | 0.345 | 730  | -1270 | -530  |
|      |                 |         |      |     | 1520     | 1540 | 0.365 | 710  | -1310 | -600  |
|      |                 |         |      |     | 1500     | 1520 | 0.186 | 720  | -1370 | -650  |
|      |                 |         |      |     | 1480     | 1500 | 0.198 | 640  | -1420 | -790  |
|      |                 |         |      |     | 1460     | 1480 | 0.252 | 520  | -1480 | -960  |
|      |                 |         |      |     | 1440     | 1460 | 0.218 | 510  | -1530 | -1020 |
|      |                 |         |      |     | 1420     | 1440 | 0.16  | 540  | -1580 | -1040 |
|      |                 |         |      |     | 1400     | 1420 | 0.15  | 540  | -1640 | -1100 |
|      |                 |         |      |     | 1380     | 1400 | 0.147 | 590  | -1690 | -1100 |

| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                 |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                 |         |      |     | 1360     | 1380 | 0.144 | 700  | -1740 | -1040 |
|      |                 |         |      |     | 1340     | 1360 | 0.097 | 750  | -1790 | -1040 |
|      |                 |         |      |     | 1320     | 1340 | 0.051 | 760  | -1830 | -1070 |
|      |                 |         |      |     | 1320     | 1800 | 3.965 | 800  | -1300 | -500  |
| 63.1 | RABOTS GLACIAER | SE0785  | 2006 |     | 1920     | 1940 | 0     | 2040 | 1380  | 3410  |
|      |                 |         |      |     | 1900     | 1920 | 0.005 | 1810 | 1290  | 3100  |
|      |                 |         |      |     | 1880     | 1900 | 0.005 | 1770 | 1150  | 2920  |
|      |                 |         |      |     | 1860     | 1880 | 0.006 | 2080 | 1010  | 3080  |
|      |                 |         |      |     | 1840     | 1860 | 0.005 | 2150 | 860   | 3010  |
|      |                 |         |      |     | 1820     | 1840 | 0.004 | 2190 | 720   | 2910  |
|      |                 |         |      |     | 1800     | 1820 | 0.004 | 2150 | 570   | 2720  |
|      |                 |         |      |     | 1780     | 1800 | 0.005 | 1620 | 420   | 2040  |
|      |                 |         |      |     | 1760     | 1780 | 0.011 | 1500 | 280   | 1780  |
|      |                 |         |      |     | 1740     | 1760 | 0.015 | 1660 | 130   | 1790  |
|      |                 |         |      |     | 1720     | 1740 | 0.018 | 1620 | -10   | 1610  |
|      |                 |         |      |     | 1700     | 1720 | 0.02  | 1600 | -150  | 1450  |
|      |                 |         |      |     | 1680     | 1700 | 0.023 | 1640 | -290  | 1340  |
|      |                 |         |      |     | 1660     | 1680 | 0.027 | 1880 | -450  | 1430  |
|      |                 |         |      |     | 1640     | 1660 | 0.037 | 1960 | -590  | 1370  |
|      |                 |         |      |     | 1620     | 1640 | 0.046 | 1820 | -730  | 1090  |
|      |                 |         |      |     | 1600     | 1620 | 0.058 | 1830 | -880  | 960   |
|      |                 |         |      |     | 1580     | 1600 | 0.069 | 1650 | -1020 | 630   |
|      |                 |         |      |     | 1560     | 1580 | 0.084 | 1750 | -1170 | 580   |
|      |                 |         |      |     | 1540     | 1560 | 0.1   | 1780 | -1310 | 470   |
|      |                 |         |      |     | 1520     | 1540 | 0.156 | 1930 | -1460 | 470   |
|      |                 |         |      |     | 1500     | 1520 | 0.216 | 1700 | -1600 | 110   |
|      |                 |         |      |     | 1480     | 1500 | 0.189 | 1340 | -1740 | -400  |
|      |                 |         |      |     | 1460     | 1480 | 0.15  | 1070 | -1880 | -820  |
|      |                 |         |      |     | 1440     | 1460 | 0.127 | 920  | -2030 | -1110 |
|      |                 |         |      |     | 1420     | 1440 | 0.115 | 860  | -2170 | -1310 |
|      |                 |         |      |     | 1400     | 1420 | 0.102 | 830  | -2320 | -1490 |
|      |                 |         |      |     | 1380     | 1400 | 0.227 | 800  | -2470 | -1680 |
|      |                 |         |      |     | 1360     | 1380 | 0.272 | 740  | -2610 | -1870 |
|      |                 |         |      |     | 1340     | 1360 | 0.243 | 680  | -2750 | -2060 |
|      |                 |         |      |     | 1320     | 1340 | 0.142 | 560  | -2900 | -2330 |
|      |                 |         |      |     | 1300     | 1320 | 0.131 | 500  | -3050 | -2550 |
|      |                 |         |      |     | 1280     | 1300 | 0.219 | 460  | -3200 | -2750 |
|      |                 |         |      |     | 1260     | 1280 | 0.227 | 380  | -3330 | -2950 |
|      |                 |         |      |     | 1240     | 1260 | 0.198 | 350  | -3480 | -3130 |
|      |                 |         |      |     | 1220     | 1240 | 0.17  | 340  | -3620 | -3280 |
|      |                 |         |      |     | 1200     | 1220 | 0.129 | 350  | -3770 | -3410 |
|      |                 |         |      |     | 1180     | 1200 | 0.092 | 340  | -3910 | -3570 |
|      |                 |         |      |     | 1160     | 1180 | 0.091 | 330  | -4050 | -3720 |
|      |                 |         |      |     | 1140     | 1160 | 0.067 | 320  | -4200 | -3880 |
|      |                 |         |      |     | 1120     | 1140 | 0.053 | 310  | -4340 | -4030 |
|      |                 |         |      |     | 1100     | 1120 | 0.045 | 320  | -4490 | -4170 |
|      |                 |         |      |     | 1080     | 1100 | 0.034 | 330  | -4630 | -4300 |
|      |                 |         |      |     | 1060     | 1080 | 0.01  | 330  | -4750 | -4410 |
|      |                 |         |      |     | 1060     | 1940 | 3.946 | 890  | -2520 | -1630 |
| 63.2 | RABOTS GLACIAER | SE0785  | 2008 |     | 1920     | 1940 | 0     | 1580 | 1300  | 2880  |
|      |                 |         |      |     | 1900     | 1920 | 0.005 | 1560 | 1240  | 2800  |
|      |                 |         |      |     | 1880     | 1900 | 0.005 | 1570 | 1150  | 2720  |
|      |                 |         |      |     | 1860     | 1880 | 0.006 | 1600 | 1050  | 2660  |
|      |                 |         |      |     | 1840     | 1860 | 0.005 | 1620 | 960   | 2580  |
|      |                 |         |      |     | 1820     | 1840 | 0.004 | 1620 | 860   | 2490  |
|      |                 |         |      |     | 1800     | 1820 | 0.004 | 1650 | 770   | 2410  |
|      |                 |         |      |     | 1780     | 1800 | 0.005 | 1560 | 670   | 2230  |
|      |                 |         |      |     | 1760     | 1780 | 0.011 | 1570 | 570   | 2140  |
|      |                 |         |      |     | 1740     | 1760 | 0.015 | 1710 | 470   | 2180  |

| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                 |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                 |         |      |     | 1720     | 1740 | 0.018 | 1740 | 380   | 2120  |
|      |                 |         |      |     | 1700     | 1720 | 0.02  | 1840 | 290   | 2130  |
|      |                 |         |      |     | 1680     | 1700 | 0.023 | 2070 | 190   | 2260  |
|      |                 |         |      |     | 1660     | 1680 | 0.027 | 2550 | 90    | 2640  |
|      |                 |         |      |     | 1640     | 1660 | 0.037 | 2780 | 0     | 2780  |
|      |                 |         |      |     | 1620     | 1640 | 0.046 | 2700 | -100  | 2600  |
|      |                 |         |      |     | 1600     | 1620 | 0.058 | 2810 | -190  | 2620  |
|      |                 |         |      |     | 1580     | 1600 | 0.069 | 2610 | -290  | 2320  |
|      |                 |         |      |     | 1560     | 1580 | 0.084 | 2890 | -390  | 2500  |
|      |                 |         |      |     | 1540     | 1560 | 0.1   | 3030 | -480  | 2550  |
|      |                 |         |      |     | 1520     | 1540 | 0.156 | 3580 | -580  | 3000  |
|      |                 |         |      |     | 1500     | 1520 | 0.216 | 3650 | -670  | 2980  |
|      |                 |         |      |     | 1480     | 1500 | 0.189 | 3500 | -760  | 2730  |
|      |                 |         |      |     | 1460     | 1480 | 0.15  | 3290 | -860  | 2430  |
|      |                 |         |      |     | 1440     | 1460 | 0.127 | 2830 | -960  | 1870  |
|      |                 |         |      |     | 1420     | 1440 | 0.115 | 2340 | -1050 | 1280  |
|      |                 |         |      |     | 1400     | 1420 | 0.102 | 1870 | -1150 | 720   |
|      |                 |         |      |     | 1380     | 1400 | 0.227 | 1420 | -1250 | 170   |
|      |                 |         |      |     | 1360     | 1380 | 0.272 | 1190 | -1340 | -150  |
|      |                 |         |      |     | 1340     | 1360 | 0.243 | 970  | -1430 | -470  |
|      |                 |         |      |     | 1320     | 1340 | 0.142 | 800  | -1530 | -730  |
|      |                 |         |      |     | 1300     | 1320 | 0.131 | 710  | -1630 | -920  |
|      |                 |         |      |     | 1280     | 1300 | 0.219 | 600  | -1730 | -1130 |
|      |                 |         |      |     | 1260     | 1280 | 0.227 | 580  | -1820 | -1240 |
|      |                 |         |      |     | 1240     | 1260 | 0.198 | 500  | -1920 | -1410 |
|      |                 |         |      |     | 1220     | 1240 | 0.17  | 430  | -2010 | -1580 |
|      |                 |         |      |     | 1200     | 1220 | 0.129 | 420  | -2110 | -1680 |
|      |                 |         |      |     | 1180     | 1200 | 0.092 | 400  | -2200 | -1800 |
|      |                 |         |      |     | 1160     | 1180 | 0.091 | 400  | -2300 | -1900 |
|      |                 |         |      |     | 1140     | 1160 | 0.067 | 390  | -2390 | -2010 |
|      |                 |         |      |     | 1120     | 1140 | 0.053 | 380  | -2490 | -2110 |
|      |                 |         |      |     | 1100     | 1120 | 0.045 | 380  | -2580 | -2210 |
|      |                 |         |      |     | 1080     | 1100 | 0.034 | 370  | -2680 | -2310 |
|      |                 |         |      |     | 1060     | 1080 | 0.01  | 360  | -2760 | -2400 |
|      |                 |         |      |     | 1060     | 1940 | 3.946 | 1630 | -1280 | 350   |
| 63.3 | RABOTS GLACIAER | SE0785  | 2009 |     | 1920     | 1940 | 0     | 3360 | 540   | 3890  |
|      |                 |         |      |     | 1900     | 1920 | 0.005 | 3300 | 480   | 3780  |
|      |                 |         |      |     | 1880     | 1900 | 0.005 | 3280 | 390   | 3670  |
|      |                 |         |      |     | 1860     | 1880 | 0.006 | 3330 | 300   | 3630  |
|      |                 |         |      |     | 1840     | 1860 | 0.005 | 3330 | 210   | 3530  |
|      |                 |         |      |     | 1820     | 1840 | 0.004 | 3320 | 120   | 3430  |
|      |                 |         |      |     | 1800     | 1820 | 0.004 | 3090 | 20    | 3120  |
|      |                 |         |      |     | 1780     | 1800 | 0.005 | 2580 | -70   | 2510  |
|      |                 |         |      |     | 1760     | 1780 | 0.011 | 2340 | -160  | 2170  |
|      |                 |         |      |     | 1740     | 1760 | 0.015 | 2490 | -260  | 2230  |
|      |                 |         |      |     | 1720     | 1740 | 0.018 | 2490 | -350  | 2150  |
|      |                 |         |      |     | 1700     | 1720 | 0.02  | 2500 | -440  | 2060  |
|      |                 |         |      |     | 1680     | 1700 | 0.023 | 2540 | -530  | 2010  |
|      |                 |         |      |     | 1660     | 1680 | 0.027 | 2770 | -630  | 2140  |
|      |                 |         |      |     | 1640     | 1660 | 0.037 | 2840 | -720  | 2120  |
|      |                 |         |      |     | 1620     | 1640 | 0.046 | 2720 | -810  | 1910  |
|      |                 |         |      |     | 1600     | 1620 | 0.058 | 2730 | -900  | 1830  |
|      |                 |         |      |     | 1580     | 1600 | 0.069 | 2460 | -990  | 1470  |
|      |                 |         |      |     | 1560     | 1580 | 0.084 | 2580 | -1090 | 1500  |
|      |                 |         |      |     | 1540     | 1560 | 0.1   | 2560 | -1180 | 1390  |
|      |                 |         |      |     | 1520     | 1540 | 0.156 | 2800 | -1270 | 1530  |
|      |                 |         |      |     | 1500     | 1520 | 0.216 | 2710 | -1360 | 1350  |
|      |                 |         |      |     | 1480     | 1500 | 0.189 | 2440 | -1450 | 990   |
|      |                 |         |      |     | 1460     | 1480 | 0.15  | 2190 | -1540 | 650   |
|      |                 |         |      |     | 1440     | 1460 | 0.127 | 1900 | -1640 | 260   |

| NR   | GLACIER NAME    | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                 |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                 |         |      |     | 1420     | 1440 | 0.115 | 1750 | -1730 | 20    |
|      |                 |         |      |     | 1400     | 1420 | 0.102 | 1620 | -1820 | -200  |
|      |                 |         |      |     | 1380     | 1400 | 0.227 | 1590 | -1920 | -330  |
|      |                 |         |      |     | 1360     | 1380 | 0.272 | 1310 | -2010 | -700  |
|      |                 |         |      |     | 1340     | 1360 | 0.243 | 970  | -2090 | -1130 |
|      |                 |         |      |     | 1320     | 1340 | 0.142 | 780  | -2190 | -1410 |
|      |                 |         |      |     | 1300     | 1320 | 0.131 | 670  | -2290 | -1620 |
|      |                 |         |      |     | 1280     | 1300 | 0.219 | 630  | -2380 | -1750 |
|      |                 |         |      |     | 1260     | 1280 | 0.227 | 580  | -2470 | -1890 |
|      |                 |         |      |     | 1240     | 1260 | 0.198 | 530  | -2560 | -2030 |
|      |                 |         |      |     | 1220     | 1240 | 0.17  | 500  | -2650 | -2150 |
|      |                 |         |      |     | 1200     | 1220 | 0.129 | 490  | -2740 | -2250 |
|      |                 |         |      |     | 1180     | 1200 | 0.092 | 490  | -2840 | -2350 |
|      |                 |         |      |     | 1160     | 1180 | 0.091 | 510  | -2930 | -2420 |
|      |                 |         |      |     | 1140     | 1160 | 0.067 | 530  | -3020 | -2490 |
|      |                 |         |      |     | 1120     | 1140 | 0.053 | 550  | -3110 | -2560 |
|      |                 |         |      |     | 1100     | 1120 | 0.045 | 560  | -3200 | -2640 |
|      |                 |         |      |     | 1080     | 1100 | 0.034 | 560  | -3290 | -2730 |
|      |                 |         |      |     | 1060     | 1080 | 0.01  | 570  | -3370 | -2800 |
|      |                 |         |      |     | 1060     | 1940 | 3.946 | 1450 | -1950 | -500  |
| 63.4 | RABOTS GLACIAER | SE0785  | 2010 |     | 1920     | 1940 | 0     | 1160 | -770  | 390   |
|      |                 |         |      |     | 1900     | 1920 | 0.005 | 1140 | -800  | 340   |
|      |                 |         |      |     | 1880     | 1900 | 0.005 | 1130 | -840  | 300   |
|      |                 |         |      |     | 1860     | 1880 | 0.006 | 1160 | -880  | 280   |
|      |                 |         |      |     | 1840     | 1860 | 0.005 | 1160 | -920  | 240   |
|      |                 |         |      |     | 1820     | 1840 | 0.004 | 1150 | -960  | 200   |
|      |                 |         |      |     | 1800     | 1820 | 0.004 | 1110 | -1000 | 120   |
|      |                 |         |      |     | 1780     | 1800 | 0.005 | 980  | -1040 | -60   |
|      |                 |         |      |     | 1760     | 1780 | 0.011 | 930  | -1080 | -150  |
|      |                 |         |      |     | 1740     | 1760 | 0.015 | 1020 | -1120 | -100  |
|      |                 |         |      |     | 1720     | 1740 | 0.018 | 1040 | -1160 | -120  |
|      |                 |         |      |     | 1700     | 1720 | 0.02  | 1080 | -1200 | -120  |
|      |                 |         |      |     | 1680     | 1700 | 0.023 | 1130 | -1240 | -110  |
|      |                 |         |      |     | 1660     | 1680 | 0.027 | 1280 | -1290 | 0     |
|      |                 |         |      |     | 1640     | 1660 | 0.037 | 1330 | -1330 | 10    |
|      |                 |         |      |     | 1620     | 1640 | 0.046 | 1270 | -1370 | -90   |
|      |                 |         |      |     | 1600     | 1620 | 0.058 | 1300 | -1410 | -100  |
|      |                 |         |      |     | 1580     | 1600 | 0.069 | 1190 | -1450 | -250  |
|      |                 |         |      |     | 1560     | 1580 | 0.084 | 1290 | -1490 | -200  |
|      |                 |         |      |     | 1540     | 1560 | 0.1   | 1310 | -1530 | -220  |
|      |                 |         |      |     | 1520     | 1540 | 0.156 | 1450 | -1570 | -120  |
|      |                 |         |      |     | 1500     | 1520 | 0.216 | 1440 | -1610 | -170  |
|      |                 |         |      |     | 1480     | 1500 | 0.189 | 1340 | -1650 | -310  |
|      |                 |         |      |     | 1460     | 1480 | 0.15  | 1220 | -1690 | -470  |
|      |                 |         |      |     | 1440     | 1460 | 0.127 | 1070 | -1730 | -670  |
|      |                 |         |      |     | 1420     | 1440 | 0.115 | 960  | -1770 | -810  |
|      |                 |         |      |     | 1400     | 1420 | 0.102 | 870  | -1810 | -940  |
|      |                 |         |      |     | 1380     | 1400 | 0.227 | 820  | -1860 | -1030 |
|      |                 |         |      |     | 1360     | 1380 | 0.272 | 730  | -1900 | -1170 |
|      |                 |         |      |     | 1340     | 1360 | 0.243 | 600  | -1930 | -1340 |
|      |                 |         |      |     | 1320     | 1340 | 0.142 | 490  | -1980 | -1480 |
|      |                 |         |      |     | 1300     | 1320 | 0.131 | 450  | -2020 | -1570 |
|      |                 |         |      |     | 1280     | 1300 | 0.219 | 440  | -2060 | -1620 |
|      |                 |         |      |     | 1260     | 1280 | 0.227 | 390  | -2100 | -1710 |
|      |                 |         |      |     | 1240     | 1260 | 0.198 | 360  | -2140 | -1780 |
|      |                 |         |      |     | 1220     | 1240 | 0.17  | 350  | -2180 | -1830 |
|      |                 |         |      |     | 1200     | 1220 | 0.129 | 340  | -2220 | -1880 |
|      |                 |         |      |     | 1180     | 1200 | 0.092 | 330  | -2260 | -1930 |
|      |                 |         |      |     | 1160     | 1180 | 0.091 | 330  | -2300 | -1980 |
|      |                 |         |      |     | 1140     | 1160 | 0.067 | 320  | -2340 | -2020 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 64.1 | RIUKOJİETNA  | SE0790  | 2006 |     | 1120     | 1140 | 0.053 | 320  | -2380 | -2070 |
|      |              |         |      |     | 1100     | 1120 | 0.045 | 310  | -2420 | -2110 |
|      |              |         |      |     | 1080     | 1100 | 0.034 | 310  | -2460 | -2160 |
|      |              |         |      |     | 1060     | 1080 | 0.01  | 310  | -2500 | -2190 |
|      |              |         |      |     | 1060     | 1940 | 3.946 | 790  | -1870 | -1080 |
|      |              |         |      |     | 1440     | 1460 | 0.516 | 800  | -1780 | -970  |
|      |              |         |      |     | 1420     | 1440 | 0.675 | 790  | -1850 | -1070 |
|      |              |         |      |     | 1400     | 1420 | 0.383 | 830  | -1960 | -1130 |
|      |              |         |      |     | 1380     | 1400 | 0.41  | 840  | -2050 | -1220 |
|      |              |         |      |     | 1360     | 1380 | 0.433 | 820  | -2150 | -1330 |
|      |              |         |      |     | 1340     | 1360 | 0.428 | 780  | -2240 | -1460 |
|      |              |         |      |     | 1320     | 1340 | 0.51  | 800  | -2340 | -1540 |
|      |              |         |      |     | 1300     | 1320 | 0.393 | 820  | -2430 | -1610 |
|      |              |         |      |     | 1280     | 1300 | 0.264 | 830  | -2520 | -1690 |
|      |              |         |      |     | 1260     | 1280 | 0.189 | 830  | -2610 | -1780 |
|      |              |         |      |     | 1240     | 1260 | 0.13  | 840  | -2710 | -1870 |
|      |              |         |      |     | 1220     | 1240 | 0.098 | 850  | -2800 | -1960 |
|      |              |         |      |     | 1200     | 1220 | 0.064 | 800  | -2900 | -2110 |
|      |              |         |      |     | 1180     | 1200 | 0.06  | 800  | -3000 | -2200 |
| 64.2 | RIUKOJİETNA  | SE0790  | 2007 |     | 1160     | 1180 | 0.054 | 810  | -3090 | -2280 |
|      |              |         |      |     | 1140     | 1160 | 0.029 | 820  | -3180 | -2360 |
|      |              |         |      |     | 1120     | 1140 | 0.016 | 810  | -3260 | -2450 |
|      |              |         |      |     | 1120     | 1460 | 4.651 | 810  | -2210 | -1400 |
|      |              |         |      |     | 1440     | 1460 | 0.516 | 1190 | -1690 | -500  |
|      |              |         |      |     | 1420     | 1440 | 0.675 | 1320 | -1790 | -470  |
|      |              |         |      |     | 1400     | 1420 | 0.383 | 1250 | -1920 | -670  |
|      |              |         |      |     | 1380     | 1400 | 0.41  | 1290 | -2030 | -750  |
|      |              |         |      |     | 1360     | 1380 | 0.433 | 1270 | -2150 | -870  |
|      |              |         |      |     | 1340     | 1360 | 0.428 | 1260 | -2270 | -1010 |
|      |              |         |      |     | 1320     | 1340 | 0.51  | 1290 | -2380 | -1090 |
|      |              |         |      |     | 1300     | 1320 | 0.393 | 1250 | -2500 | -1250 |
|      |              |         |      |     | 1280     | 1300 | 0.264 | 1230 | -2610 | -1380 |
|      |              |         |      |     | 1260     | 1280 | 0.189 | 1220 | -2720 | -1500 |
|      |              |         |      |     | 1240     | 1260 | 0.13  | 1220 | -2850 | -1620 |
|      |              |         |      |     | 1220     | 1240 | 0.098 | 1220 | -2960 | -1740 |
|      |              |         |      |     | 1200     | 1220 | 0.064 | 1200 | -3080 | -1890 |
|      |              |         |      |     | 1180     | 1200 | 0.06  | 1210 | -3200 | -2000 |
|      |              |         |      |     | 1160     | 1180 | 0.054 | 1220 | -3310 | -2090 |
| 64.3 | RIUKOJİETNA  | SE0790  | 2008 |     | 1140     | 1160 | 0.029 | 1230 | -3430 | -2200 |
|      |              |         |      |     | 1120     | 1140 | 0.016 | 1250 | -3520 | -2280 |
|      |              |         |      |     | 1120     | 1460 | 4.651 | 1260 | -2220 | -960  |
|      |              |         |      |     | 1440     | 1460 | 0.516 | 830  | -1200 | -360  |
|      |              |         |      |     | 1420     | 1440 | 0.675 | 870  | -1250 | -380  |
|      |              |         |      |     | 1400     | 1420 | 0.383 | 850  | -1310 | -460  |
|      |              |         |      |     | 1380     | 1400 | 0.41  | 870  | -1370 | -490  |
|      |              |         |      |     | 1360     | 1380 | 0.433 | 860  | -1420 | -560  |
|      |              |         |      |     | 1340     | 1360 | 0.428 | 840  | -1480 | -640  |
|      |              |         |      |     | 1320     | 1340 | 0.51  | 870  | -1540 | -670  |
|      |              |         |      |     | 1300     | 1320 | 0.393 | 870  | -1590 | -730  |
|      |              |         |      |     | 1280     | 1300 | 0.264 | 880  | -1650 | -770  |
|      |              |         |      |     | 1260     | 1280 | 0.189 | 890  | -1700 | -810  |
|      |              |         |      |     | 1240     | 1260 | 0.13  | 900  | -1760 | -860  |
|      |              |         |      |     | 1220     | 1240 | 0.098 | 900  | -1820 | -920  |
|      |              |         |      |     | 1200     | 1220 | 0.064 | 870  | -1880 | -1010 |
|      |              |         |      |     | 1180     | 1200 | 0.06  | 870  | -1940 | -1070 |
|      |              |         |      |     | 1160     | 1180 | 0.054 | 890  | -1990 | -1110 |
|      |              |         |      |     | 1140     | 1160 | 0.029 | 900  | -2050 | -1150 |

| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 64.4 | RIUKOJËTNA     | SE0790  | 2009 |     | 1120     | 1140 | 0.016 | 910  | -2100 | -1190 |
|      |                |         |      |     | 1120     | 1460 | 4.651 | 860  | -1460 | -590  |
|      |                |         |      |     | 1440     | 1460 | 0.516 | 1370 | -1640 | -270  |
|      |                |         |      |     | 1420     | 1440 | 0.675 | 1420 | -1700 | -280  |
|      |                |         |      |     | 1400     | 1420 | 0.383 | 1330 | -1780 | -450  |
|      |                |         |      |     | 1380     | 1400 | 0.41  | 1330 | -1860 | -520  |
|      |                |         |      |     | 1360     | 1380 | 0.433 | 1340 | -1930 | -590  |
|      |                |         |      |     | 1340     | 1360 | 0.428 | 1340 | -2010 | -670  |
|      |                |         |      |     | 1320     | 1340 | 0.51  | 1290 | -2080 | -790  |
|      |                |         |      |     | 1300     | 1320 | 0.393 | 1060 | -2150 | -1090 |
|      |                |         |      |     | 1280     | 1300 | 0.264 | 930  | -2230 | -1300 |
|      |                |         |      |     | 1260     | 1280 | 0.189 | 890  | -2300 | -1410 |
|      |                |         |      |     | 1240     | 1260 | 0.13  | 880  | -2380 | -1500 |
|      |                |         |      |     | 1220     | 1240 | 0.098 | 890  | -2450 | -1550 |
|      |                |         |      |     | 1200     | 1220 | 0.064 | 1290 | -2530 | -1240 |
|      |                |         |      |     | 1180     | 1200 | 0.06  | 1340 | -2600 | -1260 |
|      |                |         |      |     | 1160     | 1180 | 0.054 | 1350 | -2670 | -1320 |
|      |                |         |      |     | 1140     | 1160 | 0.029 | 1360 | -2750 | -1380 |
|      |                |         |      |     | 1120     | 1140 | 0.016 | 1370 | -2810 | -1440 |
|      |                |         |      |     | 1120     | 1460 | 4.651 | 1260 | -1980 | -720  |
| 64.5 | RIUKOJËTNA     | SE0790  | 2010 |     | 1440     | 1460 | 0.516 | 630  | -1580 | -950  |
|      |                |         |      |     | 1420     | 1440 | 0.675 | 690  | -1580 | -890  |
|      |                |         |      |     | 1400     | 1420 | 0.383 | 660  | -1590 | -930  |
|      |                |         |      |     | 1380     | 1400 | 0.41  | 640  | -1590 | -960  |
|      |                |         |      |     | 1360     | 1380 | 0.433 | 610  | -1600 | -990  |
|      |                |         |      |     | 1340     | 1360 | 0.428 | 590  | -1600 | -1010 |
|      |                |         |      |     | 1320     | 1340 | 0.51  | 590  | -1610 | -1010 |
|      |                |         |      |     | 1300     | 1320 | 0.393 | 610  | -1610 | -1000 |
|      |                |         |      |     | 1280     | 1300 | 0.264 | 660  | -1620 | -960  |
|      |                |         |      |     | 1260     | 1280 | 0.189 | 680  | -1620 | -940  |
|      |                |         |      |     | 1240     | 1260 | 0.13  | 690  | -1630 | -930  |
|      |                |         |      |     | 1220     | 1240 | 0.098 | 710  | -1630 | -930  |
|      |                |         |      |     | 1200     | 1220 | 0.064 | 730  | -1640 | -910  |
|      |                |         |      |     | 1180     | 1200 | 0.06  | 740  | -1640 | -900  |
|      |                |         |      |     | 1160     | 1180 | 0.054 | 750  | -1650 | -900  |
|      |                |         |      |     | 1140     | 1160 | 0.029 | 760  | -1650 | -890  |
|      |                |         |      |     | 1120     | 1140 | 0.016 | 770  | -1660 | -890  |
|      |                |         |      |     | 1120     | 1460 | 4.651 | 640  | -1600 | -960  |
| 65.1 | STORGLACIAEREN | SE0788  | 2006 |     | 1720     | 1740 | 0.007 | 4530 | -1570 | 1590  |
|      |                |         |      |     | 1700     | 1720 | 0.039 | 3160 | -1670 | 1210  |
|      |                |         |      |     | 1680     | 1700 | 0.07  | 2880 | -1560 | 1380  |
|      |                |         |      |     | 1660     | 1680 | 0.102 | 2940 | -1470 | 1380  |
|      |                |         |      |     | 1640     | 1660 | 0.149 | 2850 | -1490 | 500   |
|      |                |         |      |     | 1620     | 1640 | 0.156 | 1990 | -1670 | -70   |
|      |                |         |      |     | 1600     | 1620 | 0.123 | 1600 | -1900 | -560  |
|      |                |         |      |     | 1580     | 1600 | 0.125 | 1330 | -2230 | -1080 |
|      |                |         |      |     | 1560     | 1580 | 0.08  | 1150 | -2320 | -1250 |
|      |                |         |      |     | 1540     | 1560 | 0.096 | 1070 | -2370 | -1200 |
|      |                |         |      |     | 1520     | 1540 | 0.107 | 1160 | -2400 | -1200 |
|      |                |         |      |     | 1500     | 1520 | 0.225 | 1190 | -2850 | -1960 |
|      |                |         |      |     | 1480     | 1500 | 0.152 | 890  | -3090 | -2360 |
|      |                |         |      |     | 1460     | 1480 | 0.084 | 730  | -3090 | -2290 |
|      |                |         |      |     | 1440     | 1460 | 0.068 | 800  | -3090 | -2220 |
|      |                |         |      |     | 1420     | 1440 | 0.072 | 880  | -3210 | -2470 |
|      |                |         |      |     | 1400     | 1420 | 0.12  | 740  | -3290 | -2680 |
|      |                |         |      |     | 1380     | 1400 | 0.252 | 600  | -3190 | -2630 |
|      |                |         |      |     | 1360     | 1380 | 0.324 | 560  | -3360 | -2890 |
|      |                |         |      |     | 1340     | 1360 | 0.268 | 470  | -3490 | -3020 |

| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                |         |      |     | 1320     | 1340 | 0.151 | 470  | -3760 | -3140 |
|      |                |         |      |     | 1300     | 1320 | 0.096 | 620  | -3900 | -3300 |
|      |                |         |      |     | 1280     | 1300 | 0.081 | 590  | -3980 | -3510 |
|      |                |         |      |     | 1260     | 1280 | 0.083 | 470  | -4240 | -3650 |
|      |                |         |      |     | 1240     | 1260 | 0.064 | 590  | -4500 | -3860 |
|      |                |         |      |     | 1220     | 1240 | 0.053 | 640  | -4760 | -4120 |
|      |                |         |      |     | 1200     | 1220 | 0.037 | 650  | -4910 | -4080 |
|      |                |         |      |     | 1180     | 1200 | 0.017 | 830  | -4980 | -3900 |
|      |                |         |      |     | 1160     | 1180 | 0.008 | 1080 | -5000 | -3810 |
|      |                |         |      |     | 1140     | 1160 | 0.003 | 1190 |       |       |
|      |                |         |      |     | 1140     | 1740 | 3.211 | 1100 | -2820 | -1720 |
| 65.2 | STORGLACIAEREN | SE0788  | 2007 |     | 1720     | 1740 | 0.007 | 4250 | -220  | 4030  |
|      |                |         |      |     | 1700     | 1720 | 0.039 | 3420 | -330  | 3080  |
|      |                |         |      |     | 1680     | 1700 | 0.07  | 3290 | -340  | 2950  |
|      |                |         |      |     | 1660     | 1680 | 0.102 | 3010 | -340  | 2660  |
|      |                |         |      |     | 1640     | 1660 | 0.149 | 2810 | -320  | 2490  |
|      |                |         |      |     | 1620     | 1640 | 0.156 | 2440 | -350  | 2090  |
|      |                |         |      |     | 1600     | 1620 | 0.123 | 2220 | -540  | 1680  |
|      |                |         |      |     | 1580     | 1600 | 0.125 | 2010 | -750  | 1260  |
|      |                |         |      |     | 1560     | 1580 | 0.08  | 1880 | -800  | 1080  |
|      |                |         |      |     | 1540     | 1560 | 0.096 | 1840 | -910  | 940   |
|      |                |         |      |     | 1520     | 1540 | 0.107 | 2050 | -870  | 1180  |
|      |                |         |      |     | 1500     | 1520 | 0.225 | 2000 | -800  | 1200  |
|      |                |         |      |     | 1480     | 1500 | 0.152 | 1330 | -1040 | 300   |
|      |                |         |      |     | 1460     | 1480 | 0.084 | 1100 | -1160 | -60   |
|      |                |         |      |     | 1440     | 1460 | 0.068 | 1370 | -1220 | 160   |
|      |                |         |      |     | 1420     | 1440 | 0.072 | 1570 | -1230 | 340   |
|      |                |         |      |     | 1400     | 1420 | 0.12  | 1360 | -1290 | 80    |
|      |                |         |      |     | 1380     | 1400 | 0.252 | 980  | -1470 | -490  |
|      |                |         |      |     | 1360     | 1380 | 0.324 | 850  | -1290 | -440  |
|      |                |         |      |     | 1340     | 1360 | 0.268 | 730  | -1450 | -720  |
|      |                |         |      |     | 1320     | 1340 | 0.151 | 680  | -1780 | -1100 |
|      |                |         |      |     | 1300     | 1320 | 0.096 | 1050 | -1700 | -650  |
|      |                |         |      |     | 1280     | 1300 | 0.081 | 970  | -1670 | -700  |
|      |                |         |      |     | 1260     | 1280 | 0.083 | 540  | -1940 | -1400 |
|      |                |         |      |     | 1240     | 1260 | 0.064 | 860  | -2060 | -1200 |
|      |                |         |      |     | 1220     | 1240 | 0.053 | 1100 | -1900 | -810  |
|      |                |         |      |     | 1200     | 1220 | 0.037 | 990  | -1680 | -690  |
|      |                |         |      |     | 1180     | 1200 | 0.017 | 1010 | -1580 | -560  |
|      |                |         |      |     | 1160     | 1180 | 0.008 | 1140 | -1540 | -400  |
|      |                |         |      |     | 1140     | 1160 | 0.003 | 1280 | -1550 | -270  |
|      |                |         |      |     | 1140     | 1740 | 3.211 | 1530 | -1120 | 410   |
| 65.3 | STORGLACIAEREN | SE0788  | 2008 |     | 1720     | 1740 | 0.007 | 4680 | -660  | 4020  |
|      |                |         |      |     | 1700     | 1720 | 0.039 | 4230 | -730  | 3500  |
|      |                |         |      |     | 1680     | 1700 | 0.07  | 4090 | -740  | 3350  |
|      |                |         |      |     | 1660     | 1680 | 0.102 | 3800 | -730  | 3070  |
|      |                |         |      |     | 1640     | 1660 | 0.149 | 3480 | -720  | 2760  |
|      |                |         |      |     | 1620     | 1640 | 0.156 | 3210 | -730  | 2480  |
|      |                |         |      |     | 1600     | 1620 | 0.123 | 2910 | -790  | 2120  |
|      |                |         |      |     | 1580     | 1600 | 0.125 | 2730 | -850  | 1880  |
|      |                |         |      |     | 1560     | 1580 | 0.08  | 2810 | -890  | 1920  |
|      |                |         |      |     | 1540     | 1560 | 0.096 | 2570 | -920  | 1640  |
|      |                |         |      |     | 1520     | 1540 | 0.107 | 2720 | -940  | 1790  |
|      |                |         |      |     | 1500     | 1520 | 0.225 | 2850 | -950  | 1900  |
|      |                |         |      |     | 1480     | 1500 | 0.152 | 1910 | -1190 | 720   |
|      |                |         |      |     | 1460     | 1480 | 0.084 | 1550 | -1370 | 170   |
|      |                |         |      |     | 1440     | 1460 | 0.068 | 1670 | -1420 | 240   |
|      |                |         |      |     | 1420     | 1440 | 0.072 | 1780 | -1430 | 350   |
|      |                |         |      |     | 1400     | 1420 | 0.12  | 1530 | -1490 | 30    |

| NR   | GLACIER NAME   | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|----------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                |         |      |     | 1380     | 1400 | 0.252 | 1000 | -1630 | -630  |
|      |                |         |      |     | 1360     | 1380 | 0.324 | 950  | -1530 | -580  |
|      |                |         |      |     | 1340     | 1360 | 0.268 | 750  | -1690 | -950  |
|      |                |         |      |     | 1320     | 1340 | 0.151 | 920  | -1930 | -1010 |
|      |                |         |      |     | 1300     | 1320 | 0.096 | 1130 | -1870 | -740  |
|      |                |         |      |     | 1280     | 1300 | 0.081 | 1070 | -2030 | -960  |
|      |                |         |      |     | 1260     | 1280 | 0.083 | 760  | -2200 | -1450 |
|      |                |         |      |     | 1240     | 1260 | 0.064 | 1030 | -2250 | -1220 |
|      |                |         |      |     | 1220     | 1240 | 0.053 | 1210 | -2300 | -1080 |
|      |                |         |      |     | 1200     | 1220 | 0.037 | 1270 | -2450 | -1180 |
|      |                |         |      |     | 1180     | 1200 | 0.017 | 1430 | -2560 | -1130 |
|      |                |         |      |     | 1160     | 1180 | 0.008 | 1430 | -2610 | -1180 |
|      |                |         |      |     | 1140     | 1160 | 0.003 | 1160 | -2600 | -1440 |
|      |                |         |      |     | 1140     | 1740 | 3.211 | 1930 | -1350 | 580   |
| 65.4 | STORGLACIAEREN | SE0788  | 2009 |     | 1720     | 1740 | 0.007 | 2830 | -580  | 2250  |
|      |                |         |      |     | 1700     | 1720 | 0.039 | 2500 | -640  | 1860  |
|      |                |         |      |     | 1680     | 1700 | 0.07  | 2420 | -630  | 1790  |
|      |                |         |      |     | 1660     | 1680 | 0.102 | 2470 | -690  | 1780  |
|      |                |         |      |     | 1640     | 1660 | 0.149 | 2470 | -680  | 1790  |
|      |                |         |      |     | 1620     | 1640 | 0.156 | 2310 | -750  | 1560  |
|      |                |         |      |     | 1600     | 1620 | 0.123 | 2060 | -880  | 1180  |
|      |                |         |      |     | 1580     | 1600 | 0.125 | 1780 | -1030 | 740   |
|      |                |         |      |     | 1560     | 1580 | 0.08  | 1680 | -1020 | 650   |
|      |                |         |      |     | 1540     | 1560 | 0.096 | 1620 | -1120 | 500   |
|      |                |         |      |     | 1520     | 1540 | 0.107 | 1690 | -1170 | 520   |
|      |                |         |      |     | 1500     | 1520 | 0.225 | 1780 | -1100 | 680   |
|      |                |         |      |     | 1480     | 1500 | 0.152 | 1330 | -1450 | -130  |
|      |                |         |      |     | 1460     | 1480 | 0.084 | 1040 | -1750 | -710  |
|      |                |         |      |     | 1440     | 1460 | 0.068 | 1170 | -1890 | -720  |
|      |                |         |      |     | 1420     | 1440 | 0.072 | 1250 | -1990 | -740  |
|      |                |         |      |     | 1400     | 1420 | 0.12  | 1150 | -2120 | -970  |
|      |                |         |      |     | 1380     | 1400 | 0.252 | 850  | -2250 | -1410 |
|      |                |         |      |     | 1360     | 1380 | 0.324 | 650  | -2380 | -1730 |
|      |                |         |      |     | 1340     | 1360 | 0.268 | 450  | -2610 | -2160 |
|      |                |         |      |     | 1320     | 1340 | 0.151 | 360  | -2850 | -2490 |
|      |                |         |      |     | 1300     | 1320 | 0.096 | 830  | -2880 | -2040 |
|      |                |         |      |     | 1280     | 1300 | 0.081 | 900  | -2970 | -2070 |
|      |                |         |      |     | 1260     | 1280 | 0.083 | 540  | -3130 | -2580 |
|      |                |         |      |     | 1240     | 1260 | 0.064 | 700  | -3200 | -2500 |
|      |                |         |      |     | 1220     | 1240 | 0.053 | 870  | -3230 | -2350 |
|      |                |         |      |     | 1200     | 1220 | 0.037 | 930  | -3280 | -2350 |
|      |                |         |      |     | 1180     | 1200 | 0.017 | 1310 | -3310 | -2000 |
|      |                |         |      |     | 1160     | 1180 | 0.008 | 1610 | -3300 | -1680 |
|      |                |         |      |     | 1140     | 1160 | 0.003 | 1390 | -3270 | -1880 |
|      |                |         |      |     | 1140     | 1740 | 3.211 | 1300 | -1830 | -530  |
| 65.5 | STORGLACIAEREN | SE0788  | 2010 |     | 1720     | 1740 | 0.007 | 3140 | -500  | 2650  |
|      |                |         |      |     | 1700     | 1720 | 0.039 | 2680 | -630  | 2050  |
|      |                |         |      |     | 1680     | 1700 | 0.07  | 2370 | -650  | 1720  |
|      |                |         |      |     | 1660     | 1680 | 0.102 | 2260 | -660  | 1600  |
|      |                |         |      |     | 1640     | 1660 | 0.149 | 1960 | -680  | 1280  |
|      |                |         |      |     | 1620     | 1640 | 0.156 | 1550 | -790  | 760   |
|      |                |         |      |     | 1600     | 1620 | 0.123 | 1400 | -930  | 470   |
|      |                |         |      |     | 1580     | 1600 | 0.125 | 1260 | -1130 | 130   |
|      |                |         |      |     | 1560     | 1580 | 0.08  | 1200 | -1210 | 0     |
|      |                |         |      |     | 1540     | 1560 | 0.096 | 1150 | -1310 | -160  |
|      |                |         |      |     | 1520     | 1540 | 0.107 | 1170 | -1290 | -130  |
|      |                |         |      |     | 1500     | 1520 | 0.225 | 1170 | -1290 | -120  |
|      |                |         |      |     | 1480     | 1500 | 0.152 | 860  | -1690 | -830  |
|      |                |         |      |     | 1460     | 1480 | 0.084 | 660  | -1870 | -1210 |



| NR   | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                   |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                   |         |      |     | 1440     | 1460 | 0.068 | 760  | -1950 | -1190 |
|      |                   |         |      |     | 1420     | 1440 | 0.072 | 860  | -1980 | -1120 |
|      |                   |         |      |     | 1400     | 1420 | 0.12  | 780  | -2030 | -1240 |
|      |                   |         |      |     | 1380     | 1400 | 0.252 | 600  | -1990 | -1390 |
|      |                   |         |      |     | 1360     | 1380 | 0.324 | 490  | -1990 | -1510 |
|      |                   |         |      |     | 1340     | 1360 | 0.268 | 370  | -2100 | -1720 |
|      |                   |         |      |     | 1320     | 1340 | 0.151 | 340  | -2190 | -1850 |
|      |                   |         |      |     | 1300     | 1320 | 0.096 | 570  | -2190 | -1610 |
|      |                   |         |      |     | 1280     | 1300 | 0.081 | 590  | -2320 | -1720 |
|      |                   |         |      |     | 1260     | 1280 | 0.083 | 420  | -2460 | -2040 |
|      |                   |         |      |     | 1240     | 1260 | 0.064 | 570  | -2460 | -1900 |
|      |                   |         |      |     | 1220     | 1240 | 0.053 | 630  | -2480 | -1850 |
|      |                   |         |      |     | 1200     | 1220 | 0.037 | 680  | -2600 | -1920 |
|      |                   |         |      |     | 1180     | 1200 | 0.017 | 900  | -2670 | -1780 |
|      |                   |         |      |     | 1160     | 1180 | 0.008 | 1270 | -2710 | -1440 |
|      |                   |         |      |     | 1140     | 1160 | 0.003 | 1490 | -2700 | -1220 |
|      |                   |         |      |     | 1140     | 1740 | 3.211 | 960  | -1650 | -690  |
| 66.1 | TARFALAGLACIAEREN | SE0791  | 2006 |     | 1780     | 1800 | 0.001 | 790  | -2900 | -2110 |
|      |                   |         |      |     | 1760     | 1780 | 0.007 | 790  | -2930 | -2140 |
|      |                   |         |      |     | 1740     | 1760 | 0.005 | 820  | -2980 | -2150 |
|      |                   |         |      |     | 1720     | 1740 | 0.017 | 900  | -3020 | -2120 |
|      |                   |         |      |     | 1700     | 1720 | 0.026 | 920  | -3060 | -2140 |
|      |                   |         |      |     | 1680     | 1700 | 0.028 | 920  | -3110 | -2190 |
|      |                   |         |      |     | 1660     | 1680 | 0.031 | 960  | -3150 | -2190 |
|      |                   |         |      |     | 1640     | 1660 | 0.036 | 980  | -3200 | -2220 |
|      |                   |         |      |     | 1620     | 1640 | 0.045 | 1000 | -3240 | -2240 |
|      |                   |         |      |     | 1600     | 1620 | 0.06  | 1020 | -3280 | -2260 |
|      |                   |         |      |     | 1580     | 1600 | 0.06  | 1020 | -3330 | -2310 |
|      |                   |         |      |     | 1560     | 1580 | 0.063 | 1020 | -3370 | -2350 |
|      |                   |         |      |     | 1540     | 1560 | 0.068 | 1000 | -3420 | -2410 |
|      |                   |         |      |     | 1520     | 1540 | 0.07  | 970  | -3460 | -2490 |
|      |                   |         |      |     | 1500     | 1520 | 0.082 | 910  | -3500 | -2590 |
|      |                   |         |      |     | 1480     | 1500 | 0.083 | 830  | -3550 | -2720 |
|      |                   |         |      |     | 1460     | 1480 | 0.087 | 800  | -3590 | -2790 |
|      |                   |         |      |     | 1440     | 1460 | 0.083 | 860  | -3640 | -2780 |
|      |                   |         |      |     | 1420     | 1440 | 0.08  | 860  | -3680 | -2820 |
|      |                   |         |      |     | 1400     | 1420 | 0.065 | 790  | -3720 | -2930 |
|      |                   |         |      |     | 1380     | 1400 | 0.009 | 540  | -3750 | -3220 |
|      |                   |         |      |     | 1380     | 1800 | 1.006 | 910  | -3440 | -2530 |
| 66.2 | TARFALAGLACIAEREN | SE0791  | 2007 |     | 1780     | 1800 | 0.001 | 1730 | -970  | 760   |
|      |                   |         |      |     | 1760     | 1780 | 0.007 | 1730 | -980  | 750   |
|      |                   |         |      |     | 1740     | 1760 | 0.005 | 1730 | -1010 | 720   |
|      |                   |         |      |     | 1720     | 1740 | 0.017 | 1720 | -1030 | 690   |
|      |                   |         |      |     | 1700     | 1720 | 0.026 | 1710 | -1060 | 650   |
|      |                   |         |      |     | 1680     | 1700 | 0.028 | 1710 | -1080 | 620   |
|      |                   |         |      |     | 1660     | 1680 | 0.031 | 1690 | -1110 | 590   |
|      |                   |         |      |     | 1640     | 1660 | 0.036 | 1680 | -1130 | 550   |
|      |                   |         |      |     | 1620     | 1640 | 0.045 | 1660 | -1160 | 500   |
|      |                   |         |      |     | 1600     | 1620 | 0.06  | 1610 | -1180 | 430   |
|      |                   |         |      |     | 1580     | 1600 | 0.06  | 1580 | -1210 | 370   |
|      |                   |         |      |     | 1560     | 1580 | 0.063 | 1540 | -1230 | 310   |
|      |                   |         |      |     | 1540     | 1560 | 0.068 | 1500 | -1260 | 240   |
|      |                   |         |      |     | 1520     | 1540 | 0.07  | 1450 | -1280 | 160   |
|      |                   |         |      |     | 1500     | 1520 | 0.082 | 1400 | -1310 | 100   |
|      |                   |         |      |     | 1480     | 1500 | 0.083 | 1370 | -1340 | 30    |
|      |                   |         |      |     | 1460     | 1480 | 0.087 | 1350 | -1360 | -10   |
|      |                   |         |      |     | 1440     | 1460 | 0.083 | 1370 | -1380 | -10   |
|      |                   |         |      |     | 1420     | 1440 | 0.08  | 1400 | -1410 | -10   |
|      |                   |         |      |     | 1400     | 1420 | 0.065 | 1400 | -1430 | -30   |

| NR   | GLACIER NAME      | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|-------------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |                   |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
|      |                   |         |      |     | 1380     | 1400 | 0.009 | 1330 | -1450 | -120  |
|      |                   |         |      |     | 1380     | 1800 | 1.006 | 1490 | -1270 | 210   |
| 66.3 | TARFALAGLACIAEREN | SE0791  | 2008 |     | 1780     | 1800 | 0.001 | 1300 | -450  | 850   |
|      |                   |         |      |     | 1760     | 1780 | 0.007 | 1300 | -500  | 800   |
|      |                   |         |      |     | 1740     | 1760 | 0.005 | 1300 | -590  | 710   |
|      |                   |         |      |     | 1720     | 1740 | 0.017 | 1300 | -670  | 630   |
|      |                   |         |      |     | 1700     | 1720 | 0.026 | 1300 | -760  | 540   |
|      |                   |         |      |     | 1680     | 1700 | 0.028 | 1290 | -840  | 450   |
|      |                   |         |      |     | 1660     | 1680 | 0.031 | 1290 | -920  | 370   |
|      |                   |         |      |     | 1640     | 1660 | 0.036 | 1280 | -1000 | 280   |
|      |                   |         |      |     | 1620     | 1640 | 0.045 | 1270 | -1090 | 190   |
|      |                   |         |      |     | 1600     | 1620 | 0.06  | 1280 | -1170 | 110   |
|      |                   |         |      |     | 1580     | 1600 | 0.06  | 1260 | -1250 | 10    |
|      |                   |         |      |     | 1560     | 1580 | 0.063 | 1260 | -1330 | -80   |
|      |                   |         |      |     | 1540     | 1560 | 0.068 | 1270 | -1420 | -150  |
|      |                   |         |      |     | 1520     | 1540 | 0.07  | 1290 | -1500 | -210  |
|      |                   |         |      |     | 1500     | 1520 | 0.082 | 1310 | -1580 | -270  |
|      |                   |         |      |     | 1480     | 1500 | 0.083 | 1330 | -1670 | -340  |
|      |                   |         |      |     | 1460     | 1480 | 0.087 | 1320 | -1750 | -430  |
|      |                   |         |      |     | 1440     | 1460 | 0.083 | 1260 | -1830 | -580  |
|      |                   |         |      |     | 1420     | 1440 | 0.08  | 1180 | -1920 | -740  |
|      |                   |         |      |     | 1400     | 1420 | 0.065 | 1210 | -1990 | -790  |
|      |                   |         |      |     | 1380     | 1400 | 0.009 | 1470 | -2050 | -580  |
|      |                   |         |      |     | 1380     | 1800 | 1.006 | 1280 | -1470 | -200  |
| 66.4 | TARFALAGLACIAEREN | SE0791  | 2009 |     | 1780     | 1800 | 0.001 | 1520 | -1830 | -310  |
|      |                   |         |      |     | 1760     | 1780 | 0.007 | 1510 | -1890 | -380  |
|      |                   |         |      |     | 1740     | 1760 | 0.005 | 1490 | -1970 | -480  |
|      |                   |         |      |     | 1720     | 1740 | 0.017 | 1480 | -2060 | -580  |
|      |                   |         |      |     | 1700     | 1720 | 0.026 | 1460 | -2140 | -680  |
|      |                   |         |      |     | 1680     | 1700 | 0.028 | 1440 | -2220 | -780  |
|      |                   |         |      |     | 1660     | 1680 | 0.031 | 1430 | -2300 | -870  |
|      |                   |         |      |     | 1640     | 1660 | 0.036 | 1410 | -2390 | -980  |
|      |                   |         |      |     | 1620     | 1640 | 0.045 | 1400 | -2470 | -1070 |
|      |                   |         |      |     | 1600     | 1620 | 0.06  | 1400 | -2560 | -1160 |
|      |                   |         |      |     | 1580     | 1600 | 0.06  | 1340 | -2640 | -1300 |
|      |                   |         |      |     | 1560     | 1580 | 0.063 | 1270 | -2720 | -1450 |
|      |                   |         |      |     | 1540     | 1560 | 0.068 | 1150 | -2810 | -1660 |
|      |                   |         |      |     | 1520     | 1540 | 0.07  | 1030 | -2890 | -1860 |
|      |                   |         |      |     | 1500     | 1520 | 0.082 | 1040 | -2980 | -1930 |
|      |                   |         |      |     | 1480     | 1500 | 0.083 | 1080 | -3060 | -1980 |
|      |                   |         |      |     | 1460     | 1480 | 0.087 | 1090 | -3140 | -2060 |
|      |                   |         |      |     | 1440     | 1460 | 0.083 | 1030 | -3230 | -2200 |
|      |                   |         |      |     | 1420     | 1440 | 0.08  | 860  | -3310 | -2450 |
|      |                   |         |      |     | 1400     | 1420 | 0.065 | 710  | -3390 | -2680 |
|      |                   |         |      |     | 1380     | 1400 | 0.009 | 860  | -3450 | -2590 |
|      |                   |         |      |     | 1380     | 1800 | 1.006 | 1150 | -2860 | -1710 |
| 66.5 | TARFALAGLACIAEREN | SE0791  | 2010 |     | 1780     | 1800 | 0.001 | 1120 | -1690 | -570  |
|      |                   |         |      |     | 1760     | 1780 | 0.007 | 1110 | -1710 | -600  |
|      |                   |         |      |     | 1740     | 1760 | 0.005 | 1090 | -1740 | -650  |
|      |                   |         |      |     | 1720     | 1740 | 0.017 | 1070 | -1770 | -700  |
|      |                   |         |      |     | 1700     | 1720 | 0.026 | 1060 | -1800 | -740  |
|      |                   |         |      |     | 1680     | 1700 | 0.028 | 1040 | -1830 | -780  |
|      |                   |         |      |     | 1660     | 1680 | 0.031 | 1030 | -1850 | -820  |
|      |                   |         |      |     | 1640     | 1660 | 0.036 | 1020 | -1880 | -860  |
|      |                   |         |      |     | 1620     | 1640 | 0.045 | 1020 | -1910 | -900  |
|      |                   |         |      |     | 1600     | 1620 | 0.06  | 1000 | -1940 | -940  |
|      |                   |         |      |     | 1580     | 1600 | 0.06  | 990  | -1970 | -980  |
|      |                   |         |      |     | 1560     | 1580 | 0.063 | 980  | -2000 | -1020 |

| NR                 | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|--------------------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|                    |              |         |      |     | FROM     | TO   |       |      |       |       |
|                    |              |         |      |     |          |      | KM²   | MM   | MM    | MM    |
|                    |              |         |      |     | 1540     | 1560 | 0.068 | 960  | -2030 | -1070 |
|                    |              |         |      |     | 1520     | 1540 | 0.07  | 970  | -2060 | -1090 |
|                    |              |         |      |     | 1500     | 1520 | 0.082 | 1000 | -2090 | -1090 |
|                    |              |         |      |     | 1480     | 1500 | 0.083 | 990  | -2120 | -1130 |
|                    |              |         |      |     | 1460     | 1480 | 0.087 | 950  | -2150 | -1190 |
|                    |              |         |      |     | 1440     | 1460 | 0.083 | 940  | -2170 | -1240 |
|                    |              |         |      |     | 1420     | 1440 | 0.08  | 960  | -2200 | -1240 |
|                    |              |         |      |     | 1400     | 1420 | 0.065 | 980  | -2230 | -1250 |
|                    |              |         |      |     | 1380     | 1400 | 0.009 | 980  | -2250 | -1270 |
|                    |              |         |      |     | 1380     | 1800 | 1.006 | 990  | -2050 | -1060 |
| <u>SWITZERLAND</u> |              |         |      |     |          |      |       |      |       |       |
| 67.1               | BASODINO     | CH0104  | 2006 |     | 3000     | 3100 | 0.48  | 1000 |       | -1500 |
|                    |              |         |      |     | 2900     | 3000 | 0.56  | 1000 |       | -2100 |
|                    |              |         |      |     | 2800     | 2900 | 0.55  | 960  |       | -2600 |
|                    |              |         |      |     | 2700     | 2800 | 0.45  | 920  |       | -3200 |
|                    |              |         |      |     | 2600     | 2700 | 0.24  | 880  |       | -3900 |
|                    |              |         |      |     | 2600     | 3100 | 2.28  | 962  |       | -2501 |
| 67.2               | BASODINO     | CH0104  | 2007 |     | 3000     | 3100 | 0.48  | 924  |       | -140  |
|                    |              |         |      |     | 2900     | 3000 | 0.56  | 840  |       | -560  |
|                    |              |         |      |     | 2800     | 2900 | 0.55  | 760  |       | -960  |
|                    |              |         |      |     | 2700     | 2800 | 0.45  | 756  |       | -1440 |
|                    |              |         |      |     | 2600     | 2700 | 0.24  | 630  |       | -2080 |
|                    |              |         |      |     | 2600     | 3100 | 2.28  | 800  |       | -902  |
| 67.3               | BASODINO     | CH0104  | 2010 | OTH | 3000     | 3100 | 0.48  | 1490 |       | -100  |
|                    |              |         |      |     | 2900     | 3000 | 0.56  | 1595 |       | 100   |
|                    |              |         |      |     | 2800     | 2900 | 0.55  | 1521 |       | -800  |
|                    |              |         |      |     | 2700     | 2800 | 0.45  | 1521 |       | -1200 |
|                    |              |         |      |     | 2600     | 2700 | 0.24  | 1755 |       | -1500 |
|                    |              |         |      |     | 2600     | 3100 | 2.28  | 1557 | -2141 | -584  |
| 68.1               | GRIES        | CH0003  | 2006 | FXD | 3300     | 3400 | 0.004 | 1133 |       | 604   |
|                    |              |         |      |     | 3200     | 3300 | 0.081 | 1127 |       | 171   |
|                    |              |         |      |     | 3100     | 3200 | 0.287 | 1095 |       | -325  |
|                    |              |         |      |     | 3000     | 3100 | 1.454 | 1093 |       | -805  |
|                    |              |         |      |     | 2900     | 3000 | 0.945 | 1005 |       | -1440 |
|                    |              |         |      |     | 2800     | 2900 | 0.609 | 941  |       | -1961 |
|                    |              |         |      |     | 2700     | 2800 | 0.364 | 895  |       | -2451 |
|                    |              |         |      |     | 2600     | 2700 | 0.367 | 725  |       | -3416 |
|                    |              |         |      |     | 2500     | 2600 | 0.769 | 558  |       | -4300 |
|                    |              |         |      |     | 2400     | 2500 | 0.172 | 401  |       | -4994 |
|                    |              |         |      |     | 2300     | 2400 | 0     |      |       |       |
|                    |              |         |      |     | 2300     | 3400 | 5.084 | 914  | -2909 | -1995 |
| 68.2               | GRIES        | CH0003  | 2007 | FXD | 3300     | 3400 | 0.004 | 800  |       | 622   |
|                    |              |         |      |     | 3200     | 3300 | 0.082 | 799  |       | 242   |
|                    |              |         |      |     | 3100     | 3200 | 0.261 | 787  |       | -174  |
|                    |              |         |      |     | 3000     | 3100 | 1.454 | 817  |       | -549  |
|                    |              |         |      |     | 2900     | 3000 | 0.953 | 715  |       | -1047 |
|                    |              |         |      |     | 2800     | 2900 | 0.609 | 640  |       | -1438 |
|                    |              |         |      |     | 2700     | 2800 | 0.342 | 596  |       | -1786 |
|                    |              |         |      |     | 2600     | 2700 | 0.318 | 428  |       | -2586 |
|                    |              |         |      |     | 2500     | 2600 | 0.765 | 254  |       | -3370 |
|                    |              |         |      |     | 2425     | 3324 | 4.973 | 626  | -2099 | -1473 |
|                    |              |         |      |     | 2400     | 2500 | 0.154 | 143  |       | -3906 |
|                    |              |         |      |     | 2300     | 2400 | 0     |      |       |       |
|                    |              |         |      |     | 2300     | 3400 | 4.973 | 626  | -2099 | -1473 |

| NR   | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA  | BW   | BS    | BA    |
|------|--------------|---------|------|-----|----------|------|-------|------|-------|-------|
|      |              |         |      |     | FROM     | TO   | KM²   | MM   | MM    | MM    |
| 69.1 | PIZOL        | CH0081  | 2007 | OTH | 2750     | 2800 | 0.005 | 1175 | -2411 | -1235 |
|      |              |         |      |     | 2700     | 2750 | 0.021 | 1223 | -2610 | -1386 |
|      |              |         |      |     | 2650     | 2700 | 0.034 | 1188 | -2971 | -1783 |
|      |              |         |      |     | 2600     | 2650 | 0.02  | 967  | -3538 | -2570 |
|      |              |         |      |     | 2600     | 2800 | 0.081 | 1142 | -2979 | -1837 |
| 69.2 | PIZOL        | CH0081  | 2008 | OTH | 2750     | 2800 | 0.005 | 1424 | -1666 | -242  |
|      |              |         |      |     | 2700     | 2750 | 0.021 | 1527 | -1786 | -258  |
|      |              |         |      |     | 2650     | 2700 | 0.034 | 1451 | -2242 | -790  |
|      |              |         |      |     | 2600     | 2650 | 0.02  | 1358 | -2623 | -1265 |
|      |              |         |      |     | 2600     | 2800 | 0.081 | 1447 | -2179 | -731  |
| 69.3 | PIZOL        | CH0081  | 2009 | OTH | 2750     | 2800 | 0.005 | 1912 | -2316 | -403  |
|      |              |         |      |     | 2700     | 2750 | 0.021 | 1757 | -2571 | -813  |
|      |              |         |      |     | 2650     | 2700 | 0.034 | 1590 | -2851 | -1261 |
|      |              |         |      |     | 2600     | 2650 | 0.02  | 1330 | -3129 | -1798 |
|      |              |         |      |     | 2600     | 2800 | 0.081 | 1591 | -2812 | -1220 |
| 69.4 | PIZOL        | CH0081  | 2010 | FLO | 2750     | 2800 | 0.005 | 1375 | -1629 | -254  |
|      |              |         |      |     | 2700     | 2750 | 0.021 | 1351 | -1759 | -408  |
|      |              |         |      |     | 2650     | 2700 | 0.034 | 1110 | -2131 | -1021 |
|      |              |         |      |     | 2600     | 2650 | 0.02  | 1068 | -2290 | -1222 |
|      |              |         |      |     | 2600     | 2800 | 0.081 | 1180 | -2040 | -860  |
| 70.1 | SILVRETTA    | CH0090  | 2006 | FXD | 3000     | 3100 | 0.132 | 1135 |       | -804  |
|      |              |         |      |     | 2900     | 3000 | 0.579 | 1364 |       | -589  |
|      |              |         |      |     | 2800     | 2900 | 0.588 | 1509 |       | -610  |
|      |              |         |      |     | 2700     | 2800 | 0.705 | 1299 |       | -1498 |
|      |              |         |      |     | 2600     | 2700 | 0.414 | 1049 |       | -2227 |
|      |              |         |      |     | 2500     | 2600 | 0.363 | 772  |       | -3256 |
|      |              |         |      |     | 2400     | 2500 | 0.021 | 117  |       | -4719 |
|      |              |         |      |     | 2400     | 3100 | 2.814 | 1235 | -2684 | -1449 |
| 70.2 | SILVRETTA    | CH0090  | 2007 | FXD | 3000     | 3100 | 0.126 | 756  |       | -320  |
|      |              |         |      |     | 2900     | 3000 | 0.579 | 1015 |       | 48    |
|      |              |         |      |     | 2800     | 2900 | 0.583 | 972  |       | -257  |
|      |              |         |      |     | 2700     | 2800 | 0.698 | 773  |       | -1026 |
|      |              |         |      |     | 2600     | 2700 | 0.406 | 580  |       | -1666 |
|      |              |         |      |     | 2500     | 2600 | 0.362 | 363  |       | -2491 |
|      |              |         |      |     | 2467     | 3069 | 2.789 | 774  | -1690 | -916  |
|      |              |         |      |     | 2400     | 2500 | 0.023 | -257 |       | -4038 |
| 70.3 | SILVRETTA    | CH0090  | 2010 | OTH | 3000     | 3100 | 0.135 | 1409 |       | 871   |
|      |              |         |      |     | 2900     | 3000 | 0.584 | 1238 |       | 579   |
|      |              |         |      |     | 2800     | 2900 | 0.588 | 1303 |       | 174   |
|      |              |         |      |     | 2700     | 2800 | 0.69  | 1299 |       | -344  |
|      |              |         |      |     | 2600     | 2700 | 0.41  | 1438 |       | -975  |
|      |              |         |      |     | 2500     | 2600 | 0.36  | 1381 |       | -1718 |
|      |              |         |      |     | 2400     | 2500 | 0.018 | 1492 |       | -2574 |
|      |              |         |      |     | 2400     | 3100 | 2.785 | 1325 | -1593 | -268  |
| 71.1 | TSANFLEURON  | CH0033  | 2010 | FLO | 2900     | 3000 | 0.05  | 954  | -1334 | -380  |
|      |              |         |      |     | 2800     | 2900 | 0.964 | 1075 | -1622 | -547  |
|      |              |         |      |     | 2700     | 2800 | 1.143 | 1084 | -2039 | -955  |
|      |              |         |      |     | 2600     | 2700 | 0.498 | 1062 | -2497 | -1435 |
|      |              |         |      |     | 2500     | 2600 | 0.098 | 1090 | -2844 | -1754 |
|      |              |         |      |     | 2500     | 3000 | 2.752 | 1075 | -1992 | -917  |

| NR            | GLACIER NAME | PSFG NR | YEAR | SYS | ALTITUDE |      | AREA | BW | BS | BA    |
|---------------|--------------|---------|------|-----|----------|------|------|----|----|-------|
|               |              |         |      |     | FROM     | TO   |      |    |    |       |
|               |              |         |      |     |          |      | KM²  | MM | MM | MM    |
| <u>U.S.A.</u> |              |         |      |     |          |      |      |    |    |       |
| 72.1          | LEMON CREEK  | US      | 2008 | COM | 1200     | 1400 | 2.1  |    |    | 1800  |
|               |              |         |      |     | 1150     | 1200 | 2.3  |    |    | 1700  |
|               |              |         |      |     | 1100     | 1150 | 1.2  |    |    | 1200  |
|               |              |         |      |     | 1050     | 1100 | 1.6  |    |    | 1100  |
|               |              |         |      |     | 1000     | 1050 | 1.2  |    |    | 600   |
|               |              |         |      |     | 950      | 1000 | 0.7  |    |    | 400   |
|               |              |         |      |     | 900      | 950  | 0.8  |    |    | -500  |
|               |              |         |      |     | 850      | 900  | 1    |    |    | -1200 |
|               |              |         |      |     | 750      | 850  | 0.7  |    |    | -1800 |
|               |              |         |      |     | 750      | 1400 | 11.6 |    |    | 778   |
|               |              |         |      |     |          |      |      |    |    |       |
| 72.2          | LEMON CREEK  | US      | 2009 | COM | 1200     | 1400 | 2.1  |    |    | 600   |
|               |              |         |      |     | 1150     | 1200 | 2.3  |    |    | 400   |
|               |              |         |      |     | 1100     | 1150 | 1.2  |    |    | 300   |
|               |              |         |      |     | 1050     | 1100 | 1.6  |    |    | -300  |
|               |              |         |      |     | 1000     | 1050 | 1.2  |    |    | -900  |
|               |              |         |      |     | 950      | 1000 | 0.7  |    |    | -1800 |
|               |              |         |      |     | 900      | 950  | 0.8  |    |    | -2400 |
|               |              |         |      |     | 850      | 900  | 1    |    |    | -3200 |
|               |              |         |      |     | 750      | 850  | 0.7  |    |    | -3800 |
|               |              |         |      |     | 750      | 1400 | 0    |    |    | -700  |
|               |              |         |      |     |          |      |      |    |    |       |









WORLD GLACIER MONITORING SERVICE

**MASS BALANCE POINT MEASUREMENTS**

**FOR SELECTED GLACIERS**

TABLE CCCC

|              |  |
|--------------|--|
| NR           | Record number  |
| GLACIER NAME | 15 alphabetic or numeric digits                                      |
| PSFG NUMBER  | 5 digits identifying glacier with alphabetic prefix denoting country |
| YEAR         | Balance year or measurement year                                     |
| POINT-ID     | Key identifying the stake or pit                                     |
| COORDINATES  | Position of the stake or pit in decimal degrees                      |
| ELEV         | Elevation above sea level of stake or pit                            |
| BW           | Winter balance in mm water equivalent                                |
| BS           | Summer balance in mm water equivalent                                |
| BA           | Annual balance in mm water equivalent                                |

| NR        | GLACIER NAME  | PSFG NR    | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS   | BA    |
|-----------|---------------|------------|------|----------|-------------|------------|------|------|------|-------|
|           |               |            |      |          | LAT         | LON        | M    | MM   | MM   | MM    |
| ARGENTINA |               |            |      |          |             |            |      |      |      |       |
| 1.1       | MARTIAL ESTE  | AR         | 2006 | Zona01   |             |            | 1039 |      |      | -1278 |
|           |               |            |      | Zona02   |             |            | 1040 |      |      | -1188 |
|           |               |            |      | Zona03   |             |            | 1034 |      |      | -1688 |
|           |               |            |      | Zona04   |             |            | 1061 |      |      | -280  |
|           |               |            |      | Zona05   |             |            | 1100 |      |      | 157   |
|           |               |            |      | Zona06   |             |            | 1110 |      |      | 70    |
|           |               |            |      | Zona07   |             |            | 1112 |      |      | 98    |
|           |               |            |      | Zona08   |             |            | 1082 |      |      | 114   |
|           |               |            |      | Zona09   |             |            | 1086 |      |      | -412  |
|           |               |            |      | Zona10   |             |            | 1085 |      |      | -688  |
| 1.2       | MARTIAL ESTE  | AR         | 2007 | Zona01   |             |            | 1038 |      |      | -482  |
|           |               |            |      | Zona02   |             |            | 1039 |      |      | -486  |
|           |               |            |      | Zona03   |             |            | 1032 |      |      | -495  |
|           |               |            |      | Zona04   |             |            | 1060 |      |      | 296   |
|           |               |            |      | Zona05   |             |            | 1096 |      |      | 545   |
|           |               |            |      | Zona06   |             |            | 1100 |      |      | 345   |
|           |               |            |      | Zona07   |             |            | 1096 |      |      | 388   |
|           |               |            |      | Zona08   |             |            | 1078 |      |      | 624   |
|           |               |            |      | Zona09   |             |            | 1075 |      |      | 288   |
|           |               |            |      | Zona10   |             |            | 1073 |      |      | -63   |
| 1.3       | MARTIAL ESTE  | AR         | 2009 | Zona-01  | 54.78136 S  | 68.40169 W | 1038 | 1015 | -644 | 371   |
|           |               |            |      | Zona-02  | 54.78182 S  | 68.40249 W | 1036 | 947  | -540 | 406   |
|           |               |            |      | Zona-03  | 54.78223 S  | 68.40298 W | 1032 | 911  | -557 | 354   |
|           |               |            |      | Zona-04  | 54.78207 S  | 68.40411 W | 1059 | 1496 | -360 | 1136  |
|           |               |            |      | Zona-05  | 54.78197 S  | 68.40530 W | 1090 | 1777 | -85  | 1692  |
|           |               |            |      | Zona-06  | 54.78140 S  | 68.40497 W | 1093 | 1598 | -90  | 1507  |
|           |               |            |      | Zona-07  | 54.78097 S  | 68.40418 W | 1095 | 1596 | -61  | 1535  |
|           |               |            |      | Zona-08  | 54.78125 S  | 68.40379 W | 1077 | 1580 | -46  | 1534  |
|           |               |            |      | Zona-09  | 54.78078 S  | 68.40273 W | 1084 | 1560 | -318 | 1242  |
|           |               |            |      | Zona-10  | 54.78048 S  | 68.40172 W | 1071 | 1548 | -428 | 1120  |
| BOLIVIA   |               |            |      |          |             |            |      |      |      |       |
| 2.1       | CHARQUINI SUR | BO         | 2006 | 10D      | 16.30320 S  | 68.10800 W | 5053 |      |      | -958  |
|           |               |            |      | 15D*     | 16.30250 S  | 68.10830 W | 5056 |      |      | -1385 |
|           |               |            |      | 16D      | 16.30240 S  | 68.10950 W | 5012 |      |      | -3940 |
|           |               |            |      | 17D      | 16.30240 S  | 68.11030 W | 5000 |      |      | -1740 |
|           |               |            |      | 19D      | 16.30040 S  | 68.10910 W | 5106 |      |      | 165   |
|           |               |            |      | 21C      | 16.30090 S  | 68.10920 W | 5091 |      |      | 188   |
|           |               |            |      | 2Acc     | 16.30210 S  | 68.10340 W | 5215 |      |      | 324   |
|           |               |            |      | 2D       | 16.30290 S  | 68.10590 W | 5124 |      |      | -315  |
|           |               |            |      | 3A       | 16.30330 S  | 68.10540 W | 5127 |      |      | -328  |
|           |               |            |      | 4D       | 16.30350 S  | 68.10720 W | 5065 |      |      | -446  |
|           |               |            |      | 5A       | 16.30200 S  | 68.10440 W | 5181 |      |      | 344   |
|           |               |            |      | 6A       | 16.30250 S  | 68.10530 W | 5146 |      |      | -182  |
|           |               |            |      | 6D       | 16.30240 S  | 68.10500 W | 5153 |      |      | -191  |
|           |               |            |      | 7A       | 16.30170 S  | 68.10670 W | 5120 |      |      | 530   |
| 2.2       | CHARQUINI SUR | BO         | 2007 | 10D      | 16.30320 S  | 68.10800 W | 5050 |      |      | -188  |
|           |               |            |      | 10E      | 16.30350 S  | 68.10660 W | 5079 |      |      | -180  |
|           |               |            |      | 15D      | 16.30250 S  | 68.10830 W | 5053 |      |      | -168  |
|           |               |            |      | 15E      | 16.30240 S  | 68.10780 W | 5070 |      |      | -74   |
|           |               |            |      | 16D      | 16.30240 S  | 68.10950 W | 5010 |      |      | -164  |
|           |               |            |      | 16E      | 16.30220 S  | 68.10950 W | 5017 |      |      | -130  |
|           |               |            |      | 17D      | 16.30240 S  | 68.11030 W | 4996 |      |      | -228  |
|           |               |            |      | 20D      | 16.30290 S  | 68.10670 W | 5093 |      |      | -133  |
|           |               |            |      | 2A       | 16.30330 S  | 68.10460 W | 5153 |      |      | -59   |
|           |               |            |      | 2D       | 16.30300 S  | 68.10590 W | 5123 |      |      | -77   |
| 2DD       | 16.30220 S    | 68.10330 W | 5216 |          |             | 61         |      |      |      |       |

| NR  | GLACIER NAME  | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|-----|---------------|---------|------|----------|-------------|------------|------|----|----|-------|
|     |               |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|     |               |         |      | 2E       | 16.30310 S  | 68.10460 W | 5153 |    |    | -13   |
|     |               |         |      | 3A       | 16.30340 S  | 68.10540 W | 5127 |    |    | -29   |
|     |               |         |      | 3D       | 16.30290 S  | 68.10350 W | 5200 |    |    | 8     |
|     |               |         |      | 4D       | 16.30350 S  | 68.10720 W | 5065 |    |    | -118  |
|     |               |         |      | 6D       | 16.30260 S  | 68.10500 W | 5153 |    |    | 4     |
|     |               |         |      | 7A       | 16.30180 S  | 68.10670 W | 5120 |    |    | -59   |
|     |               |         |      | 7E       | 16.30140 S  | 68.10630 W | 5132 |    |    | 30    |
| 2.3 | CHARQUINI SUR | BO      | 2008 | 10D      | 16.30324 S  | 68.10797 W | 5048 |    |    | -421  |
|     |               |         |      | 10E      | 16.30353 S  | 68.10663 W | 5077 |    |    | -454  |
|     |               |         |      | 15D      | 16.30253 S  | 68.10826 W | 5051 |    |    | -271  |
|     |               |         |      | 15E      | 16.30236 S  | 68.10786 W | 5068 |    |    | 135   |
|     |               |         |      | 17D      | 16.30239 S  | 68.11031 W | 4994 |    |    | -946  |
|     |               |         |      | 1A       | 16.30314 S  | 68.10468 W | 5192 |    |    | 422   |
|     |               |         |      | 20D      | 16.30293 S  | 68.10647 W | 5091 |    |    | -156  |
|     |               |         |      | 2A       | 16.30328 S  | 68.10461 W | 5152 |    |    | 493   |
|     |               |         |      | 2D       | 16.30297 S  | 68.10587 W | 5121 |    |    | -183  |
|     |               |         |      | 2E       | 16.30314 S  | 68.10468 W | 5152 |    |    | 595   |
|     |               |         |      | 3A       | 16.30344 S  | 68.10535 W | 5126 |    |    | 537   |
|     |               |         |      | 4D       |             |            | 5062 |    |    | -247  |
|     |               |         |      | 7A       | 16.30181 S  | 68.10672 W | 5119 |    |    | 554   |
|     |               |         |      | 9C       | 16.30254 S  | 68.10760 W | 5071 |    |    | 55    |
|     |               |         |      | D3       | 16.30289 S  | 68.10345 W | 5199 |    |    | 683   |
| 2.4 | CHARQUINI SUR | BO      | 2009 | 10D      |             |            | 5048 |    |    | -250  |
|     |               |         |      | 10E      |             |            | 5077 |    |    | -259  |
|     |               |         |      | 15D      |             |            | 5051 |    |    | -266  |
|     |               |         |      | 16D      |             |            | 5007 |    |    | -474  |
|     |               |         |      | 1A       |             |            | 5192 |    |    | -151  |
|     |               |         |      | 20D      |             |            | 5091 |    |    | -200  |
|     |               |         |      | 2D       |             |            | 5121 |    |    | -202  |
|     |               |         |      | 4D       |             |            | 5062 |    |    | -226  |
|     |               |         |      | 4F       |             |            | 5094 |    |    | -185  |
|     |               |         |      | 9C       |             |            | 5071 |    |    | -182  |
|     |               |         |      | PICO1    |             |            | 5232 |    |    | 44    |
|     |               |         |      | PICO2    |             |            | 5238 |    |    | 36    |
|     |               |         |      | PICO3    |             |            | 5222 |    |    | 32    |
| 2.5 | CHARQUINI SUR | BO      | 2010 | 15H      |             |            | 5057 |    |    | -464  |
|     |               |         |      | 16E      |             |            | 5017 |    |    | -430  |
|     |               |         |      | 18H      |             |            | 4993 |    |    | -575  |
|     |               |         |      | 1H       |             |            | 5193 |    |    | -344  |
|     |               |         |      | 20D      |             |            | 5091 |    |    | -403  |
|     |               |         |      | 20E      |             |            | 5113 |    |    | -317  |
|     |               |         |      | 20F      |             |            | 5131 |    |    | -343  |
|     |               |         |      | 2D       |             |            | 5121 |    |    | -308  |
|     |               |         |      | 6D       |             |            | 5152 |    |    | -358  |
|     |               |         |      | 9C       |             |            | 5071 |    |    | -401  |
|     |               |         |      | PICO1    |             |            | 5232 |    |    | 54    |
| 3.1 | ZONGO         | BO5150  | 2006 | 10N      | 16.28040 S  | 68.13720 W | 4995 |    |    | -4938 |
|     |               |         |      | 11N      | 16.27990 S  | 68.13660 W | 4976 |    |    | -4267 |
|     |               |         |      | 12N      | 16.27950 S  | 68.13610 W | 4963 |    |    | -6108 |
|     |               |         |      | 13N      | 16.27940 S  | 68.13520 W | 4931 |    |    | -5351 |
|     |               |         |      | 14N      | 16.27920 S  | 68.13460 W | 4917 |    |    | -5971 |
|     |               |         |      | 15N      | 16.27780 S  | 68.14560 W | 5146 |    |    | -896  |
|     |               |         |      | 17N      | 16.27840 S  | 68.14520 W | 5145 |    |    | 108   |
|     |               |         |      | 18N      | 16.27840 S  | 68.14350 W | 5097 |    |    | -543  |
|     |               |         |      | 1H       | 16.27840 S  | 68.14540 W | 5143 |    |    | -540  |
|     |               |         |      | 1N       | 16.27740 S  | 68.14440 W | 5125 |    |    | 305   |
|     |               |         |      | 2N       | 16.28000 S  | 68.14300 W | 5066 |    |    | -2041 |

| NR  | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|-----|--------------|---------|------|----------|-------------|------------|------|----|----|-------|
|     |              |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|     |              |         |      | 3N       | 16.27830 S  | 68.14120 W | 5065 |    |    | -1177 |
|     |              |         |      | 5N       | 16.27980 S  | 68.14040 W | 5043 |    |    | -3670 |
|     |              |         |      | 6K       | 16.27910 S  | 68.14260 W | 5070 |    |    | -588  |
|     |              |         |      | 6N       | 16.27880 S  | 68.13910 W | 5029 |    |    | -1405 |
|     |              |         |      | 9N       | 16.28080 S  | 68.13780 W | 5004 |    |    | -4007 |
|     |              |         |      | x1       | 16.27770 S  | 68.14390 W | 5172 |    |    | 382   |
|     |              |         |      | x2       | 16.27670 S  | 68.14590 W | 5228 |    |    | 370   |
| 3.2 | ZONGO        | BO5150  | 2007 | 10O      | 16.28050 S  | 68.13730 W | 4995 |    |    | -5727 |
|     |              |         |      | 11O      | 16.28010 S  | 68.13690 W | 4970 |    |    | -6291 |
|     |              |         |      | 13O      | 16.27950 S  | 68.13550 W | 4920 |    |    | -7507 |
|     |              |         |      | 14O      | 16.27930 S  | 68.13500 W | 4911 |    |    | -6634 |
|     |              |         |      | 15N      | 16.27800 S  | 68.14580 W | 5145 |    |    | -942  |
|     |              |         |      | 1N       | 16.27770 S  | 68.14450 W | 5121 |    |    | -14   |
|     |              |         |      | 3N       | 16.27850 S  | 68.14130 W | 5055 |    |    | -2121 |
|     |              |         |      | 5D       | 16.27980 S  | 68.14080 W | 5041 |    |    | -2471 |
|     |              |         |      | 5O       | 16.27910 S  | 68.14200 W | 5043 |    |    | -1615 |
|     |              |         |      | 6K       | 16.27930 S  | 68.14270 W | 5067 |    |    | -1594 |
|     |              |         |      | 6N       | 16.27900 S  | 68.13920 W | 5026 |    |    | -2454 |
|     |              |         |      | 6O       | 16.27990 S  | 68.14060 W | 5039 |    |    | -2482 |
|     |              |         |      | 7N       | 16.28000 S  | 68.13920 W | 5023 |    |    | -4804 |
|     |              |         |      | 8N       | 16.28100 S  | 68.13900 W | 5015 |    |    | -3926 |
|     |              |         |      | Pit1     | 16.26680 S  | 68.15090 W | 5795 |    |    | 1202  |
|     |              |         |      | Pit2     | 16.26910 S  | 68.14900 W | 5606 |    |    | 705   |
|     |              |         |      | Pit3     | 16.26770 S  | 68.14760 W | 5600 |    |    | 880   |
|     |              |         |      | x1       | 16.27670 S  | 68.14590 W | 5172 |    |    | -231  |
|     |              |         |      | x2       | 16.27670 S  | 68.14650 W | 5188 |    |    | 40    |
|     |              |         |      | XXI      | 16.27800 S  | 68.14400 W | 5108 |    |    | -389  |
| 3.3 | ZONGO        | BO5150  | 2008 | 10P      | 16.28033 S  | 68.13638 W | 4987 |    |    | -3825 |
|     |              |         |      | 11P      | 16.27977 S  | 68.13597 W | 4972 |    |    | -3876 |
|     |              |         |      | 12P      | 16.27939 S  | 68.13536 W | 4960 |    |    | -5033 |
|     |              |         |      | 13P      | 16.27938 S  | 68.13449 W | 4922 |    |    | -4354 |
|     |              |         |      | 14P      | 16.27928 S  | 68.13407 W | 4914 |    |    | -4683 |
|     |              |         |      | 15N      | 16.27838 S  | 68.14532 W | 5145 |    |    | -476  |
|     |              |         |      | 16N      |             |            | 5145 |    |    | 5     |
|     |              |         |      | 17P      | 16.27907 S  | 68.14513 W | 5139 |    |    | -274  |
|     |              |         |      | 19N      |             |            | 5048 |    |    | -1067 |
|     |              |         |      | 1G       | 16.27933 S  | 68.14574 W | 5141 |    |    | -360  |
|     |              |         |      | 1N       | 16.27835 S  | 68.14378 W | 5121 |    |    | 623   |
|     |              |         |      | 1P       | 16.28007 S  | 68.14343 W | 5079 |    |    | -1027 |
|     |              |         |      | 20P      | 16.27984 S  | 68.14194 W | 5067 |    |    | -667  |
|     |              |         |      | 21P      | 16.27915 S  | 68.14136 W | 5074 |    |    | -861  |
|     |              |         |      | 2N       | 16.28045 S  | 68.14281 W | 5065 |    |    | -3560 |
|     |              |         |      | 2P       | 16.28046 S  | 68.14291 W | 5065 |    |    | -1135 |
|     |              |         |      | 3N       | 16.27894 S  | 68.14042 W | 5055 |    |    | -983  |
|     |              |         |      | 3P       | 16.27880 S  | 68.14008 W | 5045 |    |    | -534  |
|     |              |         |      | 4P       | 16.28106 S  | 68.13966 W | 5040 |    |    | -1010 |
|     |              |         |      | 5D       | 16.28017 S  | 68.13997 W | 5041 |    |    | -881  |
|     |              |         |      | 5J       |             |            | 5005 |    |    | -1770 |
|     |              |         |      | 5O       |             |            | 5055 |    |    | -649  |
|     |              |         |      | 6K       | 16.27983 S  | 68.14194 W | 5067 |    |    | -505  |
|     |              |         |      | 6P       | 16.27909 S  | 68.13840 W | 5026 |    |    | -820  |
|     |              |         |      | 7P       | 16.28017 S  | 68.13836 W | 5023 |    |    | -1892 |
|     |              |         |      | 8P       | 16.28111 S  | 68.13836 W | 5015 |    |    | -1846 |
|     |              |         |      | X2       | 16.27749 S  | 68.14587 W | 5188 |    |    | 108   |
|     |              |         |      | XX1      | 16.27874 S  | 68.14326 W | 5107 |    |    | 504   |
| 3.4 | ZONGO        | BO5150  | 2009 | 10P      |             |            | 4983 |    |    | -725  |
|     |              |         |      | 11P      |             |            | 4964 |    |    | -693  |
|     |              |         |      | 12P      |             |            | 4947 |    |    | -860  |

| NR  | GLACIER NAME  | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|-----|---------------|---------|------|----------|-------------|------------|------|----|----|-------|
|     |               |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|     |               |         |      | 13P      |             |            | 4909 |    |    | -770  |
|     |               |         |      | 15N      | 16.27810 S  | 68.14560 W | 5142 |    |    | -210  |
|     |               |         |      | 16N-1    |             |            | 5144 |    |    | -162  |
|     |               |         |      | 16P      |             |            | 5149 |    |    | -175  |
|     |               |         |      | 17P      | 68.14531 S  | 16.27895 W | 5180 |    |    | -214  |
|     |               |         |      | 18P      | 68.14298 S  | 16.27903 W | 5113 |    |    | -196  |
|     |               |         |      | 1N       | 16.27790 S  | 68.14420 W | 5112 |    |    | -112  |
|     |               |         |      | 1P       | 16.27980 S  | 68.14370 W | 5069 |    |    | -291  |
|     |               |         |      | 21P      | 68.14185 S  | 16.27877 W | 5106 |    |    | -238  |
|     |               |         |      | 2P       | 16.28030 S  | 68.14310 W | 5062 |    |    | -367  |
|     |               |         |      | 3P       | 68.14050 S  | 16.27860 W | 5078 |    |    | -243  |
|     |               |         |      | 4P       | 16.28090 S  | 68.14060 W | 5034 |    |    | -377  |
|     |               |         |      | 5O       | 16.27950 S  | 68.14180 W | 5053 |    |    | -295  |
|     |               |         |      | 6P       | 16.27890 S  | 68.13890 W | 5021 |    |    | -325  |
|     |               |         |      | 8P       | 16.28100 S  | 68.13880 W | 5007 |    |    | -461  |
| 3.5 | ZONGO         | BO5150  | 2010 | 10S      |             |            |      |    |    | -862  |
|     |               |         |      | 11S      |             |            |      |    |    | -885  |
|     |               |         |      | 12S      |             |            |      |    |    | -925  |
|     |               |         |      | 13S      |             |            |      |    |    | -1023 |
|     |               |         |      | 14S      |             |            |      |    |    | -929  |
|     |               |         |      | 16N-2    |             |            |      |    |    | -291  |
|     |               |         |      | 17P      | 68.14526 S  | 16.27899 W | 5176 |    |    | -395  |
|     |               |         |      | 18P      | 68.14287 S  | 16.27913 W | 5108 |    |    | -391  |
|     |               |         |      | 1S       | 68.14346 S  | 16.27961 W | 5108 |    |    | -401  |
|     |               |         |      | 21P      | 68.14171 S  | 16.27885 W | 5099 |    |    | -416  |
|     |               |         |      | 21S      | 68.14204 S  | 16.27835 W | 5113 |    |    | -436  |
|     |               |         |      | 2S       | 68.14303 S  | 16.27991 W | 5104 |    |    | -417  |
|     |               |         |      | 3P       | 68.14038 S  | 16.27865 W | 5073 |    |    | -405  |
|     |               |         |      | 4S       | 68.14045 S  | 16.28001 W | 5075 |    |    | -565  |
|     |               |         |      | 5S       | 68.13911 S  | 16.28100 W | 5052 |    |    | -667  |
|     |               |         |      | 6S       | 68.13913 S  | 16.27879 W | 5066 |    |    | -497  |
|     |               |         |      | Pit1     | 68.15096 S  | 16.26673 W | 5793 |    |    | 836   |
|     |               |         |      | Pit2     | 68.14890 S  | 16.26919 W | 5641 |    |    | 856   |
|     |               |         |      | Pit3     | 68.14709 S  | 16.26685 W | 5634 |    |    | 818   |
|     |               |         |      | X1       | 68.14578 S  | 16.27727 W | 5186 |    |    | -346  |
|     |               |         |      | X4       | 68.14627 S  | 16.27683 W | 5213 |    |    | -222  |
|     | <u>CANADA</u> |         |      |          |             |            |      |    |    |       |
| 4.1 | WHITE         | CA2340  | 2006 | BLUE     | 79.51280 N  | 90.88720 W | 1165 |    |    | 270   |
|     |               |         |      | BLUE2    | 79.51310 N  | 90.88358 W | 1160 |    |    | 175   |
|     |               |         |      | CJA1     | 79.53390 N  | 91.02873 W | 1489 |    |    | 206   |
|     |               |         |      | CWGA     | 79.43121 N  | 90.64647 W | 136  |    |    | -2529 |
|     |               |         |      | CWGS     | 79.43121 N  | 90.64647 W | 648  |    |    | -706  |
|     |               |         |      | CWGT     |             |            | 690  |    |    | -486  |
|     |               |         |      | CWGX     | 79.47504 N  | 90.75035 W | 643  |    |    | -594  |
|     |               |         |      | DCP1     | 79.53003 N  | 91.10122 W | 1423 |    |    | 273   |
|     |               |         |      | EXTRA    | 79.52554 N  | 90.96930 W | 1348 |    |    | 307   |
|     |               |         |      | JGC1     | 79.53780 N  | 90.99017 W | 1518 |    |    | 422   |
|     |               |         |      | JGC2     | 79.52357 N  | 90.95935 W | 1317 |    |    | 204   |
|     |               |         |      | L1       | 79.51990 N  | 90.93007 W | 1266 |    |    | 266   |
|     |               |         |      | L16A     | 79.50590 N  | 90.85202 W | 1070 |    |    | 135   |
|     |               |         |      | L17      | 79.50188 N  | 90.83994 W | 1018 |    |    | -72   |
|     |               |         |      | L18      | 79.49883 N  | 90.82777 W | 950  |    |    | -94   |
|     |               |         |      | L19D     | 79.49657 N  | 90.82066 W | 934  |    |    | 45    |
|     |               |         |      | L20      | 79.52900 N  | 90.8016 0W | 900  |    |    | -225  |
|     |               |         |      | L21      | 79.52955 N  | 90.80468 W | 877  |    |    | -306  |
|     |               |         |      | L22      | 79.49149 N  | 90.80296 W | 869  |    |    | -900  |
|     |               |         |      | LP10A    | 79.43540 N  | 90.62880 W | 190  |    |    | -1575 |
|     |               |         |      | LP2      | 79.53235 N  | 91.02012 W | 1468 |    |    | 316   |
|     |               |         |      | LP4      | 79.52772 N  | 90.98106 W | 1384 |    |    | 187   |

| NR  | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|-----|--------------|---------|------|----------|-------------|------------|------|----|----|-------|
|     |              |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
| 4.2 | WHITE        | CA2340  | 2007 | LP5      | 79.48395 N  | 90.78350 W | 750  |    |    | -540  |
|     |              |         |      | LP6      | 79.46730 N  | 90.74638 W | 570  |    |    | -1008 |
|     |              |         |      | LP8      | 79.45901 N  | 90.71532 W | 462  |    |    | -1129 |
|     |              |         |      | LP9      | 79.45115 N  | 90.69373 W | 372  |    |    | -1224 |
|     |              |         |      | M2A      |             |            | 1120 |    |    | 36    |
|     |              |         |      | QUERY    | 79.51700 N  | 90.90290 W | 1192 |    |    | 246   |
|     |              |         |      | ST4      |             |            | 251  |    |    | -1386 |
|     |              |         |      | ST6      | 79.44560 N  | 90.67043 W | 315  |    |    | -1287 |
|     |              |         |      | WG0      |             |            | 152  |    |    | -1993 |
|     |              |         |      | WG1      | 79.43205 N  | 90.65123 W | 121  |    |    | -2232 |
|     |              |         |      | WG2      |             |            | 127  |    |    | -2277 |
|     |              |         |      | WG3B     | 79.43475 N  | 90.65888 W | 171  |    |    | -1984 |
|     |              |         |      | WG4      | 79.43615 N  | 90.64967 W | 192  |    |    | -1507 |
|     |              |         |      | WG5      | 79.43950 N  | 90.62825 W | 228  |    |    | -1435 |
|     |              |         |      | WG6      | 79.45400 N  | 90.70355 W | 421  |    |    | -1107 |
|     |              |         |      | WG7A     | 79.46993 N  | 90.75578 W | 614  |    |    | -756  |
|     |              |         |      | WG8      | 79.48092 N  | 90.77268 W | 698  |    |    | -648  |
|     |              |         |      | WG9      | 79.48780 N  | 90.79002 W | 793  |    |    | -621  |
|     |              |         |      | WG9A     | 79.48780 N  | 90.79002 W | 793  |    |    | -540  |
|     |              |         |      | WPA1     | 79.53620 N  | 90.93177 W | 1455 |    |    | 186   |
|     |              |         |      | WPA2     | 79.53305 N  | 90.93573 W | 1421 |    |    | 175   |
|     |              |         |      | WPA3     | 79.52890 N  | 90.94511 W | 1355 |    |    | 266   |
|     |              |         |      | WPA4     | 79.52180 N  | 90.94770 W | 1292 |    |    | 200   |
|     |              |         |      | WPA5     | 79.51898 N  | 90.96077 W | 1278 |    |    | 204   |
|     |              |         |      | BLUE     | 79.51280 N  | 90.88720 W | 1140 |    |    | -749  |
|     |              |         |      | BLUE2    | 79.51310 N  | 90.88358 W | 1139 |    |    | -503  |
|     |              |         |      | CJA1     | 79.53390 N  | 91.02873 W | 1492 |    |    | 184   |
|     |              |         |      | CWGA     | 79.43121 N  | 90.64647 W | 132  |    |    | -4644 |
|     |              |         |      | CWGD     | 79.43598 N  | 90.63883 W | 184  |    |    | -3663 |
|     |              |         |      | CWGS     | 79.43121 N  | 90.64647 W | 620  |    |    | -2007 |
|     |              |         |      | CWGT     |             |            | 679  |    |    | -2142 |
|     |              |         |      | CWGX     | 79.47504 N  | 90.75035 W | 615  |    |    | -2038 |
|     |              |         |      | DCP1     | 79.53003 N  | 91.10122 W | 1418 |    |    | 191   |
|     |              |         |      | EXTRA    | 79.52554 N  | 90.96930 W | 1329 |    |    | 184   |
|     |              |         |      | JGC1     | 79.53780 N  | 90.99017 W | 1521 |    |    | 248   |
|     |              |         |      | JGC2     | 79.52357 N  | 90.95935 W | 1302 |    |    | 111   |
|     |              |         |      | L1       | 79.51990 N  | 90.93007 W | 1243 |    |    | 97    |
|     |              |         |      | L16A     | 79.50590 N  | 90.85202 W | 1018 |    |    | -1100 |
|     |              |         |      | L17      | 79.50188 N  | 90.83994 W | 949  |    |    | -1280 |
|     |              |         |      | L18      | 79.49883 N  | 90.82777 W | 892  |    |    | -1030 |
|     |              |         |      | L19      | 79.49657 N  | 90.82066 W | 859  |    |    | -1745 |
|     |              |         |      | L20      | 79.52900 N  | 90.80160 W | 843  |    |    | -1785 |
|     |              |         |      | L21      | 79.52955 N  | 90.80468 W | 838  |    |    | -2000 |
|     |              |         |      | L22      | 79.49149 N  | 90.80296 W | 839  |    |    | -2510 |
|     |              |         |      | LP10     | 79.43540 N  | 90.62880 W | 183  |    |    | -3253 |
|     |              |         |      | LP2      | 79.53235 N  | 91.02012 W | 1467 |    |    | 178   |
|     |              |         |      | LP4      | 79.52772 N  | 90.98106 W | 1372 |    |    | 148   |
|     |              |         |      | LP5      | 79.48395 N  | 90.78350 W | 703  |    |    | -2480 |
|     |              |         |      | LP6      | 79.46730 N  | 90.74638 W | 568  |    |    | -2770 |
|     |              |         |      | LP8      | 79.45901 N  | 90.71532 W | 490  |    |    | -2835 |
|     |              |         |      | LP9A     | 79.45115 N  | 90.69373 W | 398  |    |    | -2480 |
|     |              |         |      | QUERY    | 79.51700 N  | 90.90290 W | 1171 |    |    | -555  |
|     |              |         |      | ST6      | 79.44560 N  | 90.67043 W | 299  |    |    | -3042 |
|     |              |         |      | WG1      | 79.43205 N  | 90.65123 W | 127  |    |    | -3862 |
|     |              |         |      | WG3      | 79.43475 N  | 90.65888 W | 168  |    |    | -3630 |
|     |              |         |      | WG4      | 79.43615 N  | 90.64967 W | 196  |    |    | -3220 |
|     |              |         |      | WG5      | 79.43950 N  | 90.62825 W | 195  |    |    | -3549 |
|     |              |         |      | WG6      | 79.45400 N  | 90.70355 W | 422  |    |    | -3110 |
|     |              |         |      | WG7      | 79.46993 N  | 90.75578 W | 587  |    |    | -2560 |
|     |              |         |      | WG8      | 79.48092 N  | 90.77268 W | 686  |    |    | -2380 |

| NR  | GLACIER NAME          | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|-----|-----------------------|---------|------|----------|-------------|------------|------|----|----|-------|
|     |                       |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|     |                       |         |      | WG9      | 79.48780 N  | 90.79002 W | 740  |    |    | -2500 |
|     |                       |         |      | WPA1     | 79.53620 N  | 90.93177 W | 1458 |    |    | 110   |
|     |                       |         |      | WPA2     | 79.53305 N  | 90.93573 W | 1419 |    |    | 72    |
|     |                       |         |      | WPA3     | 79.52890 N  | 90.94511 W | 1348 |    |    | 80    |
|     |                       |         |      | WPA4     | 79.52180 N  | 90.94770 W | 1275 |    |    | 100   |
|     |                       |         |      | WPA5     | 79.51898 N  | 90.96077 W | 1260 |    |    | 113   |
|     | <u>CHINA</u>          |         |      |          |             |            |      |    |    |       |
| 5.1 | URUMQI NO. 1 E-BRANCH | CN0001  | 2006 | A        | 43.11650 N  | 86.81620 E | 3796 |    |    | -3138 |
|     |                       |         |      | B1       | 43.11670 N  | 86.81470 E | 3828 |    |    | -3005 |
|     |                       |         |      | B2       | 43.11630 N  | 86.81530 E | 3838 |    |    | -2587 |
|     |                       |         |      | B3       | 43.11650 N  | 86.81580 E | 3832 |    |    | -2655 |
|     |                       |         |      | C1       | 43.11630 N  | 86.81150 E | 3888 |    |    | -1618 |
|     |                       |         |      | C2       | 43.11570 N  | 86.81310 E | 3886 |    |    | -2229 |
|     |                       |         |      | C3       | 43.11480 N  | 86.81410 E | 3900 |    |    | -1287 |
|     |                       |         |      | D1       | 43.11440 N  | 86.80950 E | 3925 |    |    | -765  |
|     |                       |         |      | D2       | 43.11390 N  | 86.81110 E | 3936 |    |    | -508  |
|     |                       |         |      | D3       | 43.11330 N  | 86.81270 E | 3956 |    |    | -879  |
|     |                       |         |      | E1       | 43.11120 N  | 86.80770 E | 3950 |    |    | -756  |
|     |                       |         |      | E2       | 43.11110 N  | 86.80910 E | 3954 |    |    | -921  |
|     |                       |         |      | E3       | 43.11080 N  | 86.81080 E | 3960 |    |    | -750  |
|     |                       |         |      | F1       | 43.10960 N  | 86.80700 E | 3976 |    |    | -745  |
|     |                       |         |      | F2       | 43.10940 N  | 86.80850 E | 3977 |    |    | -672  |
|     |                       |         |      | F3       | 43.10900 N  | 86.81040 E | 4004 |    |    | -336  |
|     |                       |         |      | G1       | 43.10820 N  | 86.80640 E | 3996 |    |    | -705  |
|     |                       |         |      | G2       | 43.10780 N  | 86.80730 E | 3996 |    |    | -700  |
|     |                       |         |      | G3       | 43.10740 N  | 86.80910 E | 4007 |    |    | 2     |
|     |                       |         |      | H1       | 43.10600 N  | 86.80460 E | 4046 |    |    | -757  |
|     |                       |         |      | H2       | 43.10580 N  | 86.80630 E | 4046 |    |    | -262  |
|     |                       |         |      | H3       | 43.10560 N  | 86.80740 E | 4055 |    |    | -188  |
|     |                       |         |      | I        |             |            | 4060 |    |    | -92   |
|     |                       |         |      | J        |             |            | 4120 |    |    | 130   |
|     |                       |         |      | K        |             |            | 4150 |    |    | 230   |
|     |                       |         |      | L        |             |            | 4175 |    |    | 316   |
| 5.2 | URUMQI NO. 1 E-BRANCH | CN0001  | 2007 | A        | 43.11650 N  | 86.81620 E | 3796 |    |    | -2268 |
|     |                       |         |      | B1       | 43.11670 N  | 86.81470 E | 3828 |    |    | -2106 |
|     |                       |         |      | B2       | 43.11630 N  | 86.81530 E | 3838 |    |    | -2054 |
|     |                       |         |      | B3       | 43.11650 N  | 86.81580 E | 3832 |    |    | -3525 |
|     |                       |         |      | C1       | 43.11630 N  | 86.81150 E | 3888 |    |    | -1598 |
|     |                       |         |      | C2       | 43.11570 N  | 86.81310 E | 3886 |    |    | -1869 |
|     |                       |         |      | C3       | 43.11480 N  | 86.81410 E | 3900 |    |    | -1227 |
|     |                       |         |      | D1       | 43.11440 N  | 86.80950 E | 3925 |    |    | -1018 |
|     |                       |         |      | D2       | 43.11390 N  | 86.81110 E | 3936 |    |    | -1915 |
|     |                       |         |      | D3       | 43.11330 N  | 86.81270 E | 3956 |    |    | -852  |
|     |                       |         |      | E1       | 43.11120 N  | 86.80770 E | 3950 |    |    | -828  |
|     |                       |         |      | E2       | 43.11110 N  | 86.80910 E | 3954 |    |    | -801  |
|     |                       |         |      | E3       | 43.11080 N  | 86.81080 E | 3960 |    |    | -753  |
|     |                       |         |      | F1       | 43.10960 N  | 86.80700 E | 3976 |    |    | -903  |
|     |                       |         |      | F2       | 43.10940 N  | 86.80850 E | 3977 |    |    | -517  |
|     |                       |         |      | F3       | 43.10900 N  | 86.81040 E | 4004 |    |    | -129  |
|     |                       |         |      | G1       | 43.10820 N  | 86.80640 E | 3996 |    |    | -603  |
|     |                       |         |      | G2       | 43.10780 N  | 86.80730 E | 3996 |    |    | -639  |
|     |                       |         |      | G3       | 43.10740 N  | 86.80910 E | 4007 |    |    | 5     |
|     |                       |         |      | H1       | 43.10600 N  | 86.80460 E | 4046 |    |    | -722  |
|     |                       |         |      | H2       | 43.10580 N  | 86.80630 E | 4046 |    |    | 193   |
|     |                       |         |      | J        |             |            | 4120 |    |    | 130   |
|     |                       |         |      | K        |             |            | 4150 |    |    | 230   |
|     |                       |         |      | L        |             |            | 4175 |    |    | 316   |

| NR  | GLACIER NAME          | PSFG NR | YEAR | POINT-ID | COORDINATES |     | ELEV | BW   | BS    | BA    |
|-----|-----------------------|---------|------|----------|-------------|-----|------|------|-------|-------|
|     |                       |         |      |          | LAT         | LON | M    | MM   | MM    | MM    |
| 5.3 | URUMQI NO. 1 E-BRANCH | CN0001  | 2008 | A        |             |     | 3776 |      |       | -3580 |
|     |                       |         |      | B1       |             |     | 3801 |      |       | -2952 |
|     |                       |         |      | B2       |             |     | 3801 |      |       | -3222 |
|     |                       |         |      | B3       |             |     | 3801 |      |       | -3132 |
|     |                       |         |      | C1       |             |     | 3849 |      |       | -2156 |
|     |                       |         |      | C2       |             |     | 3852 |      |       | -2483 |
|     |                       |         |      | C3       |             |     | 3847 |      |       | -1324 |
|     |                       |         |      | D1       |             |     | 3894 |      |       | -1754 |
|     |                       |         |      | D2       |             |     | 3890 |      |       | -1829 |
|     |                       |         |      | D3       |             |     | 3892 |      |       | -818  |
|     |                       |         |      | E1       |             |     | 3922 |      |       | -1365 |
|     |                       |         |      | E2       |             |     | 3923 |      |       | -1140 |
|     |                       |         |      | E3       |             |     | 3923 |      |       | -1179 |
|     |                       |         |      | F1       |             |     | 3971 |      |       | -1506 |
|     |                       |         |      | F2       |             |     | 3965 |      |       | -797  |
|     |                       |         |      | F3       |             |     | 3966 |      |       | -1020 |
|     |                       |         |      | G1       |             |     | 4008 |      |       | -887  |
|     |                       |         |      | G2       |             |     | 4004 |      |       | -910  |
|     |                       |         |      | G3       |             |     | 4003 |      |       | -213  |
|     |                       |         |      | H1       |             |     | 4058 |      |       | -350  |
|     |                       |         |      | H2       |             |     | 4043 |      |       | -340  |
|     |                       |         |      | H3       |             |     | 4058 |      |       | -455  |
| 5.4 | URUMQI NO. 1 E-BRANCH | CN0001  | 2009 | A        |             |     | 3776 |      |       | -2013 |
|     |                       |         |      | B1       |             |     | 3801 |      |       | -2085 |
|     |                       |         |      | B2       |             |     | 3801 |      |       | -1305 |
|     |                       |         |      | B3       |             |     | 3801 |      |       | -2163 |
|     |                       |         |      | C2       |             |     | 3852 |      |       | -825  |
|     |                       |         |      | C3       |             |     | 3847 |      |       | -402  |
|     |                       |         |      | D2       |             |     | 3890 |      |       | -978  |
|     |                       |         |      | D3       |             |     | 3892 |      |       | 89    |
|     |                       |         |      | E1       |             |     | 3922 |      |       | -36   |
|     |                       |         |      | E2       |             |     | 3923 |      |       | -205  |
|     |                       |         |      | E3       |             |     | 3923 |      |       | -9    |
|     |                       |         |      | F2       |             |     | 3965 |      |       | -19   |
|     |                       |         |      | F3       |             |     | 3966 |      |       | -2    |
|     |                       |         |      | G1       |             |     | 4008 |      |       | -24   |
|     |                       |         |      | G2       |             |     | 4004 |      |       | -28   |
|     |                       |         |      | G3       |             |     | 4003 |      |       | 309   |
|     |                       |         |      | H1       |             |     | 4058 |      |       | -246  |
|     |                       |         |      | H2       |             |     | 4043 |      |       | 173   |
|     |                       |         |      | H3       |             |     | 4058 |      |       | 120   |
| 5.5 | URUMQI NO. 1 E-BRANCH | CN0001  | 2010 | A        |             |     | 3796 | 20   | -3719 | -3699 |
|     |                       |         |      | B1       |             |     | 3828 | 99   | -2565 | -2466 |
|     |                       |         |      | B2       |             |     | 3838 | -20  | -2608 | -2628 |
|     |                       |         |      | B3       |             |     | 3832 | 40   | -2488 | -2448 |
|     |                       |         |      | C1       |             |     | 3888 | 225  | -1791 | -1566 |
|     |                       |         |      | C2       |             |     | 3886 | -120 | -1380 | -1500 |
|     |                       |         |      | C3       |             |     | 3900 | 100  | -1603 | -1503 |
|     |                       |         |      | D1       |             |     | 3925 | 219  | -1974 | -1755 |
|     |                       |         |      | D2       |             |     | 3936 | 18   | -2412 | -2394 |
|     |                       |         |      | D3       |             |     | 3956 | 7    | -1375 | -1368 |
|     |                       |         |      | E1       |             |     | 3950 | 82   | -1168 | -1086 |
|     |                       |         |      | E2       |             |     | 3954 | 91   | -953  | -862  |
|     |                       |         |      | E3       |             |     | 3960 | -33  | -1152 | -1185 |
|     |                       |         |      | F1       |             |     | 3976 | 338  | -1691 | -1353 |
|     |                       |         |      | F2       |             |     | 3977 | 176  | -1860 | -1684 |
|     |                       |         |      | F3       |             |     | 4004 | 297  | -1006 | -709  |
|     |                       |         |      | G1       |             |     | 3996 | 60   | -1612 | -1552 |
|     |                       |         |      | G2       |             |     | 3996 | 143  | -1705 | -1562 |



| NR  | GLACIER NAME          | PSFG NR | YEAR | POINT-ID | COORDINATES |     | ELEV | BW  | BS    | BA    |
|-----|-----------------------|---------|------|----------|-------------|-----|------|-----|-------|-------|
|     |                       |         |      |          | LAT         | LON | M    | MM  | MM    | MM    |
|     |                       |         |      | G3       |             |     | 4007 | 195 | -1236 | -1041 |
|     |                       |         |      | H1       |             |     | 4046 | 151 | -1392 | -1241 |
|     |                       |         |      | H2       |             |     | 4046 | 71  | -1320 | -1249 |
|     |                       |         |      | H3       |             |     | 4055 | 300 | -1242 | -942  |
|     |                       |         |      | I        |             |     | 4055 | 320 | -1220 | -900  |
| 6.1 | URUMQI NO. 1 W-BRANCH | CN0002  | 2006 | A        |             |     | 3875 |     |       | -3172 |
|     |                       |         |      | BC       |             |     | 3900 |     |       | -2253 |
|     |                       |         |      | D1       |             |     | 3953 |     |       | -2128 |
|     |                       |         |      | D2       |             |     | 3953 |     |       | -1875 |
|     |                       |         |      | D3       |             |     | 3953 |     |       | 2701  |
|     |                       |         |      | E1       |             |     | 3964 |     |       | -2664 |
|     |                       |         |      | E2       |             |     | 3966 |     |       | -2879 |
|     |                       |         |      | E3       |             |     | 3980 |     |       | -860  |
|     |                       |         |      | F1       |             |     | 4000 |     |       | -1195 |
|     |                       |         |      | F2       |             |     | 4000 |     |       | -1420 |
|     |                       |         |      | F3       |             |     | 4019 |     |       | -1524 |
|     |                       |         |      | G1       |             |     | 4026 |     |       | -476  |
|     |                       |         |      | G2       |             |     | 4044 |     |       | -367  |
|     |                       |         |      | G3       |             |     | 4044 |     |       | -690  |
|     |                       |         |      | H1       |             |     | 4050 |     |       | -804  |
|     |                       |         |      | H2       |             |     | 4052 |     |       | -564  |
|     |                       |         |      | H3       |             |     | 4054 |     |       | -246  |
|     |                       |         |      | L1       |             |     | 4130 |     |       | 332   |
|     |                       |         |      | L2       |             |     | 4250 |     |       | 316   |
|     |                       |         |      | L3       |             |     | 4300 |     |       | 298   |
| 6.2 | URUMQI NO. 1 W-BRANCH | CN0002  | 2007 | A        |             |     | 3854 |     |       | -2889 |
|     |                       |         |      | BC       |             |     | 3900 |     |       | -2037 |
|     |                       |         |      | D1       |             |     | 3953 |     |       | -3094 |
|     |                       |         |      | D2       |             |     | 3953 |     |       | -1590 |
|     |                       |         |      | D3       |             |     | 3953 |     |       | -1355 |
|     |                       |         |      | E2       |             |     | 3966 |     |       | -337  |
|     |                       |         |      | E3       |             |     | 3980 |     |       | -1300 |
|     |                       |         |      | F1       |             |     | 4000 |     |       | -2507 |
|     |                       |         |      | F2       |             |     | 4000 |     |       | -3492 |
|     |                       |         |      | F3       |             |     | 4019 |     |       | -1525 |
|     |                       |         |      | G1       |             |     | 4026 |     |       | -881  |
|     |                       |         |      | G2       |             |     | 4044 |     |       | -588  |
|     |                       |         |      | G3       |             |     | 4044 |     |       | 1371  |
|     |                       |         |      | H1       |             |     | 4050 |     |       | -470  |
|     |                       |         |      | H2       |             |     | 4052 |     |       | -1086 |
|     |                       |         |      | I        |             |     | 4070 |     |       | -1623 |
| 6.3 | URUMQI NO. 1 W-BRANCH | CN0002  | 2008 | A        |             |     | 3875 |     |       | -3328 |
|     |                       |         |      | BC       |             |     | 3900 |     |       | -2385 |
|     |                       |         |      | D1       |             |     | 3953 |     |       | -2396 |
|     |                       |         |      | D2       |             |     | 3953 |     |       | -1872 |
|     |                       |         |      | E1       |             |     | 3964 |     |       | -896  |
|     |                       |         |      | E2       |             |     | 3966 |     |       | -2337 |
|     |                       |         |      | E3       |             |     | 3980 |     |       | -1389 |
|     |                       |         |      | F1       |             |     | 4000 |     |       | -2408 |
|     |                       |         |      | F2       |             |     | 4000 |     |       | -1353 |
|     |                       |         |      | F3       |             |     | 4019 |     |       | -1112 |
|     |                       |         |      | G1       |             |     | 4026 |     |       | -822  |
|     |                       |         |      | G2       |             |     | 4026 |     |       | -1023 |
|     |                       |         |      | H1       |             |     | 4050 |     |       | -1218 |
|     |                       |         |      | H2       |             |     | 4052 |     |       | -1029 |
|     |                       |         |      | H3       |             |     | 4054 |     |       | -783  |
|     |                       |         |      | I        |             |     | 4100 |     |       | 1356  |

| NR       | GLACIER NAME          | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW    | BS    | BA    |
|----------|-----------------------|---------|------|----------|-------------|------------|------|-------|-------|-------|
|          |                       |         |      |          | LAT         | LON        | M    | MM    | MM    | MM    |
| 6.4      | URUMQI NO. 1 W-BRANCH | CN0002  | 2009 | A        |             |            | 3875 |       |       | -2964 |
|          |                       |         |      | BC       |             |            | 3900 |       |       | -1591 |
|          |                       |         |      | D1       |             |            | 3953 |       |       | -1018 |
|          |                       |         |      | D2       |             |            | 3953 |       |       | -1420 |
|          |                       |         |      | D3       |             |            | 3953 |       |       | -258  |
|          |                       |         |      | E1       |             |            | 3964 |       |       | -787  |
|          |                       |         |      | E2       |             |            | 3966 |       |       | -1350 |
|          |                       |         |      | E3       |             |            | 3980 |       |       | 7     |
|          |                       |         |      | F1       |             |            | 4000 |       |       | -1121 |
|          |                       |         |      | F2       |             |            | 4000 |       |       | 303   |
|          |                       |         |      | F3       |             |            | 4019 |       |       | 909   |
|          |                       |         |      | G1       |             |            | 4026 |       |       | 1254  |
|          |                       |         |      | G2       |             |            | 4026 |       |       | 874   |
|          |                       |         |      | G3       |             |            | 4044 |       |       | -589  |
|          |                       |         |      | H1       |             |            | 4050 |       |       | 1288  |
|          |                       |         |      | H2       |             |            | 4052 |       |       | -114  |
|          |                       |         |      | I        |             |            | 4070 |       |       | -1238 |
| 6.5      | URUMQI NO. 1 W-BRANCH | CN0002  | 2010 | A        |             |            | 3854 | -309  | -3822 | -4131 |
|          |                       |         |      | BC       |             |            | 3900 | -12   | -2604 | -2616 |
|          |                       |         |      | D1       |             |            | 3953 | 1038  | -3522 | -2484 |
|          |                       |         |      | D2       |             |            | 3953 | 1603  | -4717 | -3114 |
|          |                       |         |      | D3       |             |            | 3953 | -810  | -3089 | -3899 |
|          |                       |         |      | E1       |             |            | 3964 | -165  | -1689 | -1854 |
|          |                       |         |      | E2       |             |            | 3966 | 675   | -3325 | -2650 |
|          |                       |         |      | E3       |             |            | 3980 | -1106 | -960  | -2066 |
|          |                       |         |      | F1       |             |            | 4000 | 180   | -2865 | -2685 |
|          |                       |         |      | F2       |             |            | 4000 | 1345  | -3800 | -2455 |
|          |                       |         |      | F3       |             |            | 4019 | 1784  | -1584 | 200   |
|          |                       |         |      | G1       |             |            | 4026 | -786  | -951  | -1737 |
|          |                       |         |      | G2       |             |            | 4026 | 327   | -3351 | -3024 |
|          |                       |         |      | G3       |             |            | 4044 | 146   | -3228 | -3082 |
|          |                       |         |      | H1       |             |            | 4050 | 528   | -1599 | -1071 |
|          |                       |         |      | H2       |             |            | 4052 | 456   | -1230 | -774  |
|          |                       |         |      | H3       |             |            | 4054 | 67    | -792  | -725  |
| I        |                       |         | 4070 | 961      | -1650       | -689       |      |       |       |       |
| COLOMBIA |                       |         |      |          |             |            |      |       |       |       |
| 7.1      | LA CONEJERA           | CO0033  | 2009 | 1        | 4.81442 N   | 75.37338 W | 4716 |       |       | -5484 |
|          |                       |         |      | 10       | 4.80948 N   | 75.37164 W | 4810 |       |       | -2229 |
|          |                       |         |      | 11       | 4.80790 N   | 75.37136 W | 4817 |       |       | -2786 |
|          |                       |         |      | 12       | 4.81325 N   | 75.36977 W | 4823 |       |       | -916  |
|          |                       |         |      | 13       | 4.81615 N   | 75.37317 W | 4857 |       |       | -634  |
|          |                       |         |      | 14       | 4.81591 N   | 75.37336 W | 4920 |       |       | 4037  |
|          |                       |         |      | 2        | 4.81478 N   | 75.37287 W | 4717 |       |       | -6026 |
|          |                       |         |      | 3        | 4.81554 N   | 75.37374 W | 4721 |       |       | -6070 |
|          |                       |         |      | 4        | 4.81387 N   | 75.37137 W | 4754 |       |       | -4019 |
|          |                       |         |      | 5        | 4.81475 N   | 75.37094 W | 4755 |       |       | -3992 |
|          |                       |         |      | 6        | 4.81524 N   | 75.37225 W | 4757 |       |       | -3695 |
|          |                       |         |      | 7        | 4.81275 N   | 75.37246 W | 4789 |       |       | -3201 |
|          |                       |         |      | 8        | 4.81105 N   | 75.37186 W | 4792 |       |       | -2672 |
|          |                       |         |      | 9        | 4.81202 N   | 75.37065 W | 4799 |       |       | -1625 |
| 7.2      | LA CONEJERA           | CO0033  | 2010 | 1        | 4.81442 N   | 75.37338 W | 4716 |       |       | -4133 |
|          |                       |         |      | 10       | 4.80948 N   | 75.37164 W | 4810 |       |       | -3233 |
|          |                       |         |      | 11       | 4.80790 N   | 75.37136 W | 4817 |       |       | -2485 |
|          |                       |         |      | 12       | 4.81325 N   | 75.36977 W | 4823 |       |       | -2056 |
|          |                       |         |      | 13       | 4.81615 N   | 75.37317 W | 4857 |       |       | -2023 |
|          |                       |         |      | 14       | 4.81591 N   | 75.37336 W | 4920 |       |       | -793  |
|          |                       |         |      | 2        | 4.81478 N   | 75.37287 W | 4717 |       |       | -3884 |
|          |                       |         |      | 3        | 4.81554 N   | 75.37374 W | 4721 |       |       | -6181 |

| NR   | GLACIER NAME        | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|------|---------------------|---------|------|----------|-------------|------------|------|----|----|-------|
|      |                     |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|      |                     |         |      | 4        | 4.81387 N   | 75.37137 W | 4754 |    |    | -3988 |
|      |                     |         |      | 5        | 4.81475 N   | 75.37094 W | 4755 |    |    | -3570 |
|      |                     |         |      | 6        | 4.81524 N   | 75.37225 W | 4757 |    |    | -3267 |
|      |                     |         |      | 7        | 4.81275 N   | 75.37246 W | 4789 |    |    | -2781 |
|      |                     |         |      | 8        | 4.81105 N   | 75.37186 W | 4792 |    |    | -2408 |
|      |                     |         |      | 9        | 4.81202 N   | 75.37065 W | 4799 |    |    | -786  |
|      | <u>GREENLAND</u>    |         |      |          |             |            |      |    |    |       |
| 8.1  | FREYA               | GL      | 2008 | 1        | 74.40657 N  | 20.89771 W | 340  |    |    | -2142 |
|      |                     |         |      | 10       | 74.36696 N  | 20.80684 W | 915  |    |    | -666  |
|      |                     |         |      | 11       | 74.37025 N  | 20.82663 W | 920  |    |    | -45   |
|      |                     |         |      | 12       | 74.36990 N  | 20.84039 W | 980  |    |    | -540  |
|      |                     |         |      | 2        | 74.40324 N  | 20.88462 W | 435  |    |    | -1521 |
|      |                     |         |      | 3        | 74.39815 N  | 20.86697 W | 535  |    |    | -1197 |
|      |                     |         |      | 4        | 74.39140 N  | 20.85815 W | 640  |    |    | -954  |
|      |                     |         |      | 5        | 74.39266 N  | 20.84622 W | 650  |    |    | -972  |
|      |                     |         |      | 6        | 74.39436 N  | 20.83925 W | 650  |    |    | -729  |
|      |                     |         |      | 7        | 74.38650 N  | 20.82915 W | 720  |    |    | -558  |
|      |                     |         |      | 8        | 74.37930 N  | 20.81545 W | 800  |    |    | -180  |
|      |                     |         |      | 9        | 74.37141 N  | 20.81308 W | 877  |    |    | -45   |
|      |                     |         |      | S1       | 74.36411 N  | 20.80833 W | 1050 |    |    | 10    |
|      |                     |         |      | S2       | 74.36137 N  | 20.81144 W | 1070 |    |    | 65    |
| 8.2  | FREYA               | GL      | 2009 | 1        | 74.40657 N  | 20.89771 W | 340  |    |    | -1953 |
|      |                     |         |      | 10       | 74.36696 N  | 20.80684 W | 915  |    |    | 103   |
|      |                     |         |      | 11       | 74.37025 N  | 20.82663 W | 920  |    |    | 15    |
|      |                     |         |      | 12       | 74.36990 N  | 20.84039 W | 980  |    |    | 130   |
|      |                     |         |      | 2        | 74.40324 N  | 20.88462 W | 435  |    |    | -1431 |
|      |                     |         |      | 3        | 74.39815 N  | 20.86697 W | 535  |    |    | -1305 |
|      |                     |         |      | 4        | 74.39140 N  | 20.85815 W | 640  |    |    | -369  |
|      |                     |         |      | 5        | 74.39266 N  | 20.84622 W | 650  |    |    | -1193 |
|      |                     |         |      | 6        | 74.39436 N  | 20.83925 W | 650  |    |    | -873  |
|      |                     |         |      | 7        | 74.38650 N  | 20.82915 W | 720  |    |    | -765  |
|      |                     |         |      | 8        | 74.37930 N  | 20.81545 W | 800  |    |    | -45   |
|      |                     |         |      | 9        | 74.37141 N  | 20.81308 W | 877  |    |    | 116   |
|      |                     |         |      | S1       | 74.36411 N  | 20.80833 W | 1050 |    |    | 168   |
|      |                     |         |      | S2       | 74.36137 N  | 20.81144 W | 1070 |    |    | 221   |
| 8.3  | FREYA               | GL      | 2010 | 10       | 74.36696 N  | 20.80684 W | 915  |    |    | -1026 |
|      |                     |         |      | 11       | 74.37025 N  | 20.82663 W | 920  |    |    | -405  |
|      |                     |         |      | 12       | 74.36990 N  | 20.84039 W | 980  |    |    | -450  |
|      |                     |         |      | 13       | 74.36867 N  | 20.81673 W | 856  |    |    | -99   |
|      |                     |         |      | 14       | 74.40574 N  | 20.89022 W | 358  |    |    | -2187 |
|      |                     |         |      | 15       | 74.37563 N  | 20.80950 W | 793  |    |    | -837  |
|      |                     |         |      | S1       | 74.36411 N  | 20.80833 W | 1050 |    |    | 495   |
|      | <u>ITALY</u>        |         |      |          |             |            |      |    |    |       |
| 9.1  | CALDERONE           | IT1006  | 2006 | 1        | 42.47372 N  | 13.56833 E | 2658 |    |    | 585   |
|      |                     |         |      | 2        | 42.47197 N  | 13.56651 E | 2798 |    |    | 1452  |
| 9.2  | CALDERONE           | IT1006  | 2007 | 1        | 42.47372 N  | 13.56833 E | 2658 |    |    | 1620  |
|      |                     |         |      | 2        | 42.47197 N  | 13.56651 E | 2798 |    |    | 1800  |
| 9.3  | CALDERONE           | IT1006  | 2008 | 1        | 42.47372 N  | 13.56833 E | 2658 |    |    | 357   |
|      |                     |         |      | 2        | 42.47197 N  | 13.56651 E | 2798 |    |    | -82   |
| 10.1 | CARESER OCCIDENTALE | IT      | 2006 | 10A      | 46.45032 N  | 10.68920 E | 3161 |    |    | -1881 |
|      |                     |         |      | 10B      | 46.45186 N  | 10.68770 E | 3249 |    |    | -1706 |
|      |                     |         |      | 4L       | 46.44783 N  | 10.69012 E | 3108 |    |    | -2156 |
|      |                     |         |      | 9C       | 46.44858 N  | 10.68783 E | 3138 |    |    | -1737 |

| NR   | GLACIER NAME        | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS    | BA    |
|------|---------------------|---------|------|----------|-------------|------------|------|------|-------|-------|
|      |                     |         |      |          | LAT         | LON        | M    | MM   | MM    | MM    |
| 10.2 | CARESER OCCIDENTALE | IT      | 2007 | 10A      | 46.45032 N  | 10.68920 E | 3161 |      |       | -2585 |
|      |                     |         |      | 10B      | 46.45186 N  | 10.68770 E | 3249 |      |       | -2615 |
|      |                     |         |      | 4L       | 46.44783 N  | 10.69012 E | 3108 |      |       | -2590 |
|      |                     |         |      | 9C       | 46.44858 N  | 10.68783 E | 3138 |      |       | -2187 |
| 10.3 | CARESER OCCIDENTALE | IT      | 2008 | 10A      | 46.45028 N  | 10.68917 E | 3160 |      |       | -1782 |
|      |                     |         |      | 4L       | 46.44790 N  | 10.69010 E | 3107 |      |       | -1938 |
|      |                     |         |      | 9C       | 46.44858 N  | 10.68780 E | 3139 |      |       | -1490 |
| 10.4 | CARESER OCCIDENTALE | IT      | 2009 | 10A      | 46.45028 N  | 10.68917 E | 3160 |      |       | -1144 |
|      |                     |         |      | 10C      | 46.45230 N  | 10.68772 E | 3266 |      |       | 477   |
|      |                     |         |      | 4L       | 46.44790 N  | 10.69010 E | 3107 |      |       | -1549 |
|      |                     |         |      | 9C       | 46.44858 N  | 10.68780 E | 3139 |      |       | -660  |
| 10.5 | CARESER OCCIDENTALE | IT      | 2010 | 10A      |             |            | 3160 | 1238 | -2049 | -811  |
|      |                     |         |      | 4L       |             |            | 3107 | 1087 | -2467 | -1380 |
| 11.1 | CARESER ORIENTALE   | IT      | 2006 | 13       | 46.45377 N  | 10.69845 E | 3083 |      |       | -1984 |
|      |                     |         |      | 13A      | 46.45444 N  | 10.70224 E | 3070 |      |       | -2403 |
|      |                     |         |      | 1B       | 46.44671 N  | 10.70381 E | 2932 |      |       | -3424 |
|      |                     |         |      | 2B       | 46.45014 N  | 10.70844 E | 2963 |      |       | -2516 |
|      |                     |         |      | 3A       | 46.45403 N  | 10.71292 E | 3072 |      |       | -1827 |
|      |                     |         |      | 3L       | 46.45105 N  | 10.69843 E | 3027 |      |       | -2412 |
|      |                     |         |      | 5        | 46.45792 N  | 10.70800 E | 3174 |      |       | -1800 |
|      |                     |         |      | 5L       | 46.45543 N  | 10.71533 E | 3103 |      |       | -1962 |
|      |                     |         |      | 6A       | 46.45392 N  | 10.72106 E | 3086 |      |       | -1832 |
|      |                     |         |      | 6L       | 46.45128 N  | 10.72149 E | 3077 |      |       | -1498 |
|      |                     |         |      | 7A       | 46.44873 N  | 10.71856 E | 3049 |      |       | -1926 |
|      |                     |         |      | 7B       | 46.44925 N  | 10.72333 E | 3089 |      |       | -1206 |
|      |                     |         |      | 8D       | 46.44955 N  | 10.71398 E | 3002 |      |       | -2030 |
|      |                     |         |      | 8L       | 46.44684 N  | 10.70914 E | 2899 |      |       | -3316 |
|      |                     |         |      | 9B       | 46.44855 N  | 10.69953 E | 2989 |      |       | -2853 |
| 11.2 | CARESER ORIENTALE   | IT      | 2007 | 13       | 46.45377 N  | 10.69845 E | 3083 |      |       | -2812 |
|      |                     |         |      | 13A      | 46.45444 N  | 10.70224 E | 3070 |      |       | -3046 |
|      |                     |         |      | 1B       | 46.44671 N  | 10.70381 E | 2932 |      |       | -4104 |
|      |                     |         |      | 2B       | 46.45014 N  | 10.70844 E | 2963 |      |       | -3452 |
|      |                     |         |      | 3A       | 46.45403 N  | 10.71292 E | 3072 |      |       | -2632 |
|      |                     |         |      | 3L       | 46.45105 N  | 10.69843 E | 3027 |      |       | -3123 |
|      |                     |         |      | 5        | 46.45792 N  | 10.70800 E | 3174 |      |       | -2498 |
|      |                     |         |      | 5L       | 46.45543 N  | 10.71533 E | 3103 |      |       | -2277 |
|      |                     |         |      | 6A       | 46.45392 N  | 10.72106 E | 3086 |      |       | -2290 |
|      |                     |         |      | 6L       | 46.45128 N  | 10.72149 E | 3077 |      |       | -2290 |
|      |                     |         |      | 7A       | 46.44873 N  | 10.71856 E | 3049 |      |       | -2516 |
|      |                     |         |      | 7B       | 46.44925 N  | 10.72333 E | 3089 |      |       | -1710 |
|      |                     |         |      | 8D       | 46.44955 N  | 10.71398 E | 3002 |      |       | -3100 |
|      |                     |         |      | 8L       | 46.44684 N  | 10.70914 E | 2899 |      |       | -4262 |
|      |                     |         |      | 9B       | 46.44855 N  | 10.69953 E | 2989 |      |       | -3388 |
| 11.3 | CARESER ORIENTALE   | IT      | 2008 | 13B      | 46.45329 N  | 10.69812 E | 3074 |      |       | -2008 |
|      |                     |         |      | 1C       | 46.44670 N  | 10.70381 E | 2931 |      |       | -2743 |
|      |                     |         |      | 2C       | 46.45017 N  | 10.70995 E | 2971 |      |       | -2642 |
|      |                     |         |      | 3L       | 46.45107 N  | 10.69847 E | 3027 |      |       | -2718 |
|      |                     |         |      | 5B       | 46.45792 N  | 10.70800 E | 3173 |      |       | -1822 |
|      |                     |         |      | 5L       | 46.45545 N  | 10.71536 E | 3103 |      |       | -1688 |
|      |                     |         |      | 6A       | 46.45394 N  | 10.72106 E | 3087 |      |       | -1590 |
|      |                     |         |      | 7A       | 46.44874 N  | 10.71856 E | 3048 |      |       | -1609 |
|      |                     |         |      | 7B       | 46.44926 N  | 10.72334 E | 3091 |      |       | -1006 |
|      |                     |         |      | 8D       | 46.44959 N  | 10.71398 E | 3002 |      |       | -2286 |
|      |                     |         |      | 8M       | 46.44686 N  | 10.70910 E | 2898 |      |       | -3307 |
|      |                     |         |      | 9B       | 46.44857 N  | 10.69955 E | 2989 |      |       | -2477 |

| NR   | GLACIER NAME             | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS    | BA    |
|------|--------------------------|---------|------|----------|-------------|------------|------|------|-------|-------|
|      |                          |         |      |          | LAT         | LON        | M    | MM   | MM    | MM    |
| 11.4 | CARESER ORIENTALE        | IT      | 2009 | 13B      | 46.45329 N  | 10.69812 E | 3074 |      |       | -1367 |
|      |                          |         |      | 1C       | 46.44670 N  | 10.70381 E | 2931 |      |       | -2581 |
|      |                          |         |      | 2C       | 46.45017 N  | 10.70995 E | 2971 |      |       | -1682 |
|      |                          |         |      | 3B       | 46.45200 N  | 10.71688 E | 3063 |      |       | -911  |
|      |                          |         |      | 3L       | 46.45107 N  | 10.69847 E | 3027 |      |       | -2282 |
|      |                          |         |      | 5L       | 46.45545 N  | 10.71536 E | 3103 |      |       | -1386 |
|      |                          |         |      | 6A       | 46.45394 N  | 10.72106 E | 3087 |      |       | -1118 |
|      |                          |         |      | 7A       | 46.44874 N  | 10.71856 E | 3048 |      |       | -957  |
|      |                          |         |      | 7B       | 46.44926 N  | 10.72334 E | 3091 |      |       | -412  |
|      |                          |         |      | 8D       | 46.44959 N  | 10.71398 E | 3002 |      |       | -1650 |
|      |                          |         |      | 8M       | 46.44686 N  | 10.70910 E | 2898 |      |       | -2530 |
|      |                          |         |      | 9B       | 46.44857 N  | 10.69955 E | 2989 |      |       | -2010 |
| 11.5 | CARESER ORIENTALE        | IT      | 2010 | 2C       |             |            | 2971 | 873  | -2940 | -2067 |
|      |                          |         |      | 5B       |             |            | 3173 | 599  | -1294 | -695  |
|      |                          |         |      | 5L       |             |            | 3103 | 1002 | -1788 | -787  |
|      |                          |         |      | 6A       |             |            | 3087 | 1063 | -1352 | -289  |
|      |                          |         |      | 6L       |             |            | 3077 | 1200 | -1661 | -461  |
|      |                          |         |      | 7B       |             |            | 3091 | 1200 | -1118 | 82    |
|      |                          |         |      | 8D       |             |            | 3002 | 950  | -2706 | -1756 |
|      |                          |         |      | 8M       |             |            | 2898 | 847  | -3943 | -3096 |
| 12.1 | FONT. BIANCA / WEISSB.F. | IT0713  | 2006 | 1/00     | 46.48289 N  | 10.76970 E | 3212 |      |       | -1530 |
|      |                          |         |      | 10/00    | 46.48570 N  | 10.77387 E | 3078 |      |       | -2160 |
|      |                          |         |      | 11/05    | 46.48187 N  | 10.77707 E | 3006 |      |       | -3078 |
|      |                          |         |      | 12/05    | 46.48574 N  | 10.77605 E | 3009 |      |       | -1953 |
|      |                          |         |      | 13/06    | 46.48500 N  | 10.77571 E | 3051 |      |       | -1620 |
|      |                          |         |      | 14/03    | 46.48219 N  | 10.77888 E | 2946 |      |       | -3015 |
|      |                          |         |      | 15/06    | 46.48215 N  | 10.78005 E | 2911 |      |       | -2034 |
|      |                          |         |      | 16/99    | 46.48492 N  | 10.77048 E | 3068 |      |       | -1485 |
|      |                          |         |      | 2/03     | 46.48583 N  | 10.76853 E | 3206 |      |       | -1494 |
|      |                          |         |      | 20/03    | 46.48124 N  | 10.77507 E | 2960 |      |       | -1935 |
|      |                          |         |      | 3/99     | 46.48786 N  | 10.76832 E | 3217 |      |       | -1584 |
|      |                          |         |      | 4/04     | 46.48476 N  | 10.76624 E | 3316 |      |       | -1458 |
|      |                          |         |      | 6/06     | 46.48202 N  | 10.77458 E | 3084 |      |       | -2448 |
|      |                          |         |      | 7/06     | 46.48445 N  | 10.77279 E | 3127 |      |       | -2187 |
|      |                          |         |      | 8/06     | 46.48289 N  | 10.77195 E | 3156 |      |       | -1539 |
|      |                          |         |      | 9/06     | 46.48557 N  | 10.77172 E | 3115 |      |       | -2142 |
| 12.2 | FONT. BIANCA / WEISSB.F. | IT0713  | 2007 | 01/07    | 46.48283 N  | 10.76948 E | 3222 |      |       | -916  |
|      |                          |         |      | 02/07    | 46.48592 N  | 10.76851 E | 3199 |      |       | -1532 |
|      |                          |         |      | 03/07    | 46.48795 N  | 10.76841 E | 3212 |      |       | -1997 |
|      |                          |         |      | 04/04    | 46.48476 N  | 10.76624 E | 3316 |      |       | -1205 |
|      |                          |         |      | 06/06    | 46.48202 N  | 10.77458 E | 3084 |      |       | -2201 |
|      |                          |         |      | 07/06    | 46.48445 N  | 10.77279 E | 3120 |      |       | -1764 |
|      |                          |         |      | 08/06    | 46.48289 N  | 10.77195 E | 3161 |      |       | -1306 |
|      |                          |         |      | 09/06    | 46.48557 N  | 10.77172 E | 3116 |      |       | -1739 |
|      |                          |         |      | 10/00    | 46.48570 N  | 10.77387 E | 3068 |      |       | -1874 |
|      |                          |         |      | 11/07    | 46.48206 N  | 10.77694 E | 3009 |      |       | -2992 |
|      |                          |         |      | 12/05    | 46.48574 N  | 10.77605 E | 3009 |      |       | -1689 |
|      |                          |         |      | 13/06    | 46.48500 N  | 10.77571 E | 3037 |      |       | -1844 |
|      |                          |         |      | 14/07    | 46.48216 N  | 10.77849 E | 2950 |      |       | -2570 |
|      |                          |         |      | 15/06    | 46.48215 N  | 10.78005 E | 2911 |      |       | -1400 |
|      |                          |         |      | 16/07    | 46.48475 N  | 10.77053 E | 3162 |      |       | -1181 |
|      |                          |         |      | 20/07    | 46.48124 N  | 10.77507 E | 2960 |      |       | -2092 |
| 12.3 | FONT. BIANCA / WEISSB.F. | IT0713  | 2010 | 41068    | 46.48288 N  | 10.77199 E | 3160 | 1400 | -1480 | -80   |
|      |                          |         |      | 41069    | 46.48561 N  | 10.77179 E | 3116 | 1200 | -1317 | -117  |
|      |                          |         |      | 41073    | 46.48503 N  | 10.77554 E | 3037 | 1200 | -1588 | -388  |
|      |                          |         |      | 41075    | 46.48252 N  | 10.78020 E | 2907 | 1300 | -1813 | -513  |
|      |                          |         |      | 41091    | 46.48286 N  | 10.76956 E | 3222 | 1900 | -1815 | 85    |

| NR   | GLACIER NAME            | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS    | BA    |
|------|-------------------------|---------|------|----------|-------------|------------|------|------|-------|-------|
|      |                         |         |      |          | LAT         | LON        | M    | MM   | MM    | MM    |
|      |                         |         |      | 41092    | 46.48580 N  | 10.76859 E | 3199 | 1500 | -1537 | -37   |
|      |                         |         |      | 41093    | 46.48805 N  | 10.76848 E | 3212 | 1300 | -1571 | -271  |
|      |                         |         |      | 41101    | 46.48212 N  | 10.77691 E | 3009 | 1300 | -2767 | -1467 |
|      |                         |         |      | 41104    | 46.48231 N  | 10.77849 E | 2948 | 1300 | -2461 | -1161 |
|      |                         |         |      | 41106    | 46.48464 N  | 10.77061 E | 3161 | 1400 | -1406 | -6    |
|      |                         |         |      | 41110    | 46.48190 N  | 10.77634 E | 3027 | 1500 | -3174 | -1674 |
|      |                         |         |      | 41111    | 46.48153 N  | 10.77359 E | 3125 | 1300 | -1703 | -403  |
|      |                         |         |      | 41133    | 46.48574 N  | 10.77605 E | 3019 | 1200 | -1849 | -649  |
|      |                         |         |      | 41158    | 46.48196 N  | 10.77460 E | 3085 | 900  | -2143 | -1243 |
|      |                         |         |      | 41159    | 46.48443 N  | 10.77276 E | 3120 | 1200 | -1667 | -467  |
|      |                         |         |      | 41162    | 46.48569 N  | 10.77387 E | 3067 | 1200 | -2064 | -864  |
| 13.1 | GRAND ETRET             | IT0134  | 2008 | 11       | 45.48230 N  | 7.22050 E  | 2725 |      |       | -2192 |
|      |                         |         |      | 1bis     |             |            | 2725 |      |       | -2192 |
|      |                         |         |      | 3        |             |            | 2780 |      |       | -2427 |
|      |                         |         |      | 30       | 45.48080 N  | 7.22000 E  | 2780 |      |       | -2427 |
|      |                         |         |      | 31       | 45.47880 N  | 7.22050 E  | 2840 |      |       | -1740 |
|      |                         |         |      | 32       | 45.47750 N  | 7.21910 E  | 2880 |      |       | -1279 |
|      |                         |         |      | 3bis     |             |            | 2840 |      |       | -1740 |
|      |                         |         |      | 3ter     |             |            | 2880 |      |       | -1279 |
|      |                         |         |      | 4        |             |            | 2955 |      |       | -1244 |
|      |                         |         |      | 40       | 45.47630 N  | 7.22170 E  | 2955 |      |       | -1244 |
|      |                         |         |      | 41       | 45.47450 N  | 7.22170 E  | 3035 |      |       | -783  |
|      |                         |         |      | 4bis     |             |            | 3035 |      |       | -783  |
|      |                         |         |      | 5        |             |            | 3035 |      |       | -1522 |
|      |                         |         |      | 50       | 45.47710 N  | 7.22580 E  | 3035 |      |       | -1522 |
| 13.2 | GRAND ETRET             | IT0134  | 2009 | 1bis     |             |            | 2725 |      |       | 85    |
|      |                         |         |      | 3        |             |            | 2780 |      |       | 230   |
|      |                         |         |      | 3bis     |             |            | 2840 |      |       | -183  |
|      |                         |         |      | 3ter     |             |            | 2880 |      |       | 1332  |
|      |                         |         |      | 4        |             |            | 2955 |      |       | 270   |
|      |                         |         |      | 4bis     |             |            | 3035 |      |       | 780   |
|      |                         |         |      | 5        |             |            | 3035 |      |       | -609  |
| 14.1 | LUNGA (VED.) / LANGENF. | IT0733  | 2009 | 10       | 46.47308 N  | 10.61973 E | 2792 |      |       | -3216 |
|      |                         |         |      | 11       | 46.47010 N  | 10.61685 E | 2905 |      |       | -3238 |
|      |                         |         |      | 12       | 46.47107 N  | 10.61492 E | 2929 |      |       | -2730 |
|      |                         |         |      | 13       | 46.47182 N  | 10.61104 E | 3040 |      |       | -2004 |
|      |                         |         |      | 14       | 46.47335 N  | 10.61339 E | 2969 |      |       | -1913 |
|      |                         |         |      | 15       | 46.47285 N  | 10.60946 E | 3053 |      |       | -1021 |
|      |                         |         |      | 16       | 46.46993 N  | 10.60842 E | 3090 |      |       | -1873 |
|      |                         |         |      | 17       | 46.46878 N  | 10.61114 E | 3069 |      |       | -2610 |
|      |                         |         |      | 18       | 46.47127 N  | 10.60730 E | 3092 |      |       | -923  |
|      |                         |         |      | 19       | 46.47150 N  | 10.60470 E | 3156 |      |       | -1696 |
|      |                         |         |      | 2        | 46.47198 N  | 10.62525 E | 2729 |      |       | -4338 |
|      |                         |         |      | 20       | 46.46692 N  | 10.60525 E | 3179 |      |       | -1899 |
|      |                         |         |      | 21       | 46.46498 N  | 10.60854 E | 3232 |      |       | -1288 |
|      |                         |         |      | 22       | 46.46420 N  | 10.60503 E | 3227 |      |       | -834  |
|      |                         |         |      | 27       | 46.47301 N  | 10.61128 E | 3017 |      |       | -1752 |
|      |                         |         |      | 28       | 46.47197 N  | 10.61656 E | 2897 |      |       | -2226 |
|      |                         |         |      | 3        | 46.47268 N  | 10.62597 E | 2722 |      |       | -4653 |
|      |                         |         |      | 4        | 46.47240 N  | 10.62433 E | 2748 |      |       | -4050 |
|      |                         |         |      | 5        | 46.47168 N  | 10.62288 E | 2775 |      |       | -4923 |
|      |                         |         |      | 6        | 46.47318 N  | 10.62343 E | 2759 |      |       | -4149 |
|      |                         |         |      | 7        | 46.47259 N  | 10.62192 E | 2782 |      |       | -3924 |
|      |                         |         |      | 8        | 46.47126 N  | 10.62073 E | 2821 |      |       | -3742 |
|      |                         |         |      | 9        | 46.47124 N  | 10.61863 E | 2861 |      |       | -2738 |
| 14.2 | LUNGA (VED.) / LANGENF. | IT0733  | 2010 | 10       | 46.47301 N  | 10.61970 E | 2786 | 1300 | -3637 | -2337 |
|      |                         |         |      | 11       | 46.47010 N  | 10.61687 E | 2887 | 1500 | -2381 | -881  |

| NR   | GLACIER NAME           | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS    | BA    |
|------|------------------------|---------|------|----------|-------------|------------|------|------|-------|-------|
|      |                        |         |      |          | LAT         | LON        | M    | MM   | MM    | MM    |
|      |                        |         |      | 12       | 46.47090 N  | 10.61492 E | 2933 | 1050 | -3039 | -1989 |
|      |                        |         |      | 13       | 46.47182 N  | 10.61102 E | 3040 | 1450 | -2361 | -911  |
|      |                        |         |      | 14       | 46.47342 N  | 10.61314 E | 2967 | 1500 | -2712 | -1212 |
|      |                        |         |      | 15       | 46.47284 N  | 10.60943 E | 3052 | 1100 | -1430 | -330  |
|      |                        |         |      | 16       | 46.46993 N  | 10.60842 E | 3089 | 1000 | -1854 | -854  |
|      |                        |         |      | 17       | 46.46878 N  | 10.61114 E | 3069 | 900  | -1529 | -629  |
|      |                        |         |      | 18       | 46.47127 N  | 10.60730 E | 3088 | 1100 | -1435 | -335  |
|      |                        |         |      | 19       | 46.47161 N  | 10.60462 E | 3155 | 1250 | -870  | 380   |
|      |                        |         |      | 20       | 46.46692 N  | 10.60525 E | 3180 |      |       | 5     |
|      |                        |         |      | 21       | 46.46498 N  | 10.60854 E | 3234 |      |       | -979  |
|      |                        |         |      | 22       | 46.46420 N  | 10.60487 E | 3216 | 800  | -1113 | -313  |
|      |                        |         |      | 23       | 46.46246 N  | 10.61337 E | 3291 | 1100 | -1058 | 43    |
|      |                        |         |      | 24       | 46.46241 N  | 10.60842 E | 3263 | 1150 | -261  | 889   |
|      |                        |         |      | 27       | 46.47259 N  | 10.61133 E | 3010 | 1500 | -2091 | -591  |
|      |                        |         |      | 28       | 46.47198 N  | 10.61657 E | 2904 | 900  | -1785 | -885  |
|      |                        |         |      | 29       | 46.46949 N  | 10.60572 E | 3115 | 1100 | -1711 | -611  |
|      |                        |         |      | 30       | 46.46416 N  | 10.61162 E | 3267 | 1000 | -950  | 50    |
|      |                        |         |      | 33       | 46.47299 N  | 10.60632 E | 3144 | 1300 | -1489 | -189  |
|      |                        |         |      | 4        | 46.47264 N  | 10.62460 E | 2735 | 1200 | -4833 | -3633 |
|      |                        |         |      | 5        | 46.47169 N  | 10.62287 E | 2762 | 1150 | -4588 | -3438 |
|      |                        |         |      | 6        | 46.47329 N  | 10.62333 E | 2725 | 1100 | -4238 | -3138 |
|      |                        |         |      | 7        | 46.47256 N  | 10.62175 E | 2772 | 900  | -3759 | -2859 |
|      |                        |         |      | 8        | 46.47114 N  | 10.62057 E | 2817 | 1450 | -3373 | -1923 |
|      |                        |         |      | 9        | 46.47124 N  | 10.61863 E | 2857 | 1250 | -2937 | -1687 |
| 15.1 | MALAVALLE / UEBELTALF. | IT0875  | 2006 | P01      | 46.95030 N  | 11.20230 E | 2675 |      |       | -2979 |
|      |                        |         |      | P02      | 46.94680 N  | 11.19850 E | 2729 |      |       | -2556 |
|      |                        |         |      | P03      | 46.94630 N  | 11.19330 E | 2784 |      |       | -2295 |
|      |                        |         |      | P04      | 46.94880 N  | 11.18810 E | 2827 |      |       | -2439 |
|      |                        |         |      | P05      | 46.95020 N  | 11.18480 E | 2874 |      |       | -4442 |
|      |                        |         |      | P06      | 46.95190 N  | 11.18410 E | 2927 |      |       | -2070 |
|      |                        |         |      | P07      | 46.95680 N  | 11.18380 E | 3006 |      |       | -1575 |
|      |                        |         |      | P08      | 46.95840 N  | 11.18250 E | 3036 |      |       | -702  |
|      |                        |         |      | P09      | 46.95920 N  | 11.18140 E | 3068 |      |       | -234  |
|      |                        |         |      | P10      | 46.96290 N  | 11.17780 E | 3141 |      |       | -1723 |
|      |                        |         |      | P11      | 46.94340 N  | 11.19500 E | 2775 |      |       | -2268 |
|      |                        |         |      | P12      | 46.94010 N  | 11.19360 E | 2833 |      |       | -4850 |
|      |                        |         |      | P13      | 46.93700 N  | 11.19190 E | 2873 |      |       | -1350 |
|      |                        |         |      | P14      | 46.96310 N  | 11.18730 E | 3142 |      |       | -520  |
|      |                        |         |      | P15      | 46.96490 N  | 11.18530 E | 3195 |      |       | -364  |
|      |                        |         |      | P16      | 46.96720 N  | 11.18780 E | 3252 |      |       | -208  |
|      |                        |         |      | P17      | 46.94470 N  | 11.18290 E | 2891 |      |       | -1170 |
|      |                        |         |      | P18      | 46.94200 N  | 11.18320 E | 2948 |      |       | -882  |
|      |                        |         |      | P19      | 46.93960 N  | 11.18340 E | 2997 |      |       | -741  |
|      |                        |         |      | P20      | 46.95350 N  | 11.16580 E | 3411 |      |       | -1285 |
|      |                        |         |      | P21      | 46.95160 N  | 11.16570 E | 3367 |      |       | -1118 |
|      |                        |         |      | P22      | 46.95740 N  | 11.17170 E | 3170 |      |       | 287   |
|      |                        |         |      | P23      | 46.95410 N  | 11.17540 E | 3134 |      |       | 443   |
|      |                        |         |      | ST01     | 46.95030 N  | 11.20230 E | 2675 | 198  | -3177 | -2979 |
|      |                        |         |      | ST02     | 46.94680 N  | 11.19850 E | 2729 | 903  | -3459 | -2556 |
|      |                        |         |      | ST03     | 46.94630 N  | 11.19330 E | 2784 | 1018 | -3313 | -2295 |
|      |                        |         |      | ST04     | 46.94880 N  | 11.18810 E | 2827 | 951  | -3390 | -2439 |
|      |                        |         |      | ST05     | 46.95020 N  | 11.18480 E | 2874 | 1202 | -5644 | -4442 |
|      |                        |         |      | ST06     | 46.95190 N  | 11.18410 E | 2927 | 843  | -2913 | -2070 |
|      |                        |         |      | ST07     | 46.95680 N  | 11.18380 E | 3006 | 1066 | -2641 | -1575 |
|      |                        |         |      | ST08     | 46.95840 N  | 11.18250 E | 3036 | 1530 | -2232 | -702  |
|      |                        |         |      | ST09     | 46.95920 N  | 11.18140 E | 3068 | 1786 | -2020 | -234  |
|      |                        |         |      | ST10     | 46.96290 N  | 11.17780 E | 3141 | 1328 | -3051 | -1723 |
|      |                        |         |      | ST11     | 46.94340 N  | 11.19500 E | 2775 | 684  | -2952 | -2268 |
|      |                        |         |      | ST12     | 46.94010 N  | 11.19360 E | 2833 | 1106 | -5956 | -4850 |
|      |                        |         |      | ST13     | 46.93700 N  | 11.19190 E | 2873 | 1288 | -2638 | -1350 |

| NR   | GLACIER NAME          | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS    | BA    |
|------|-----------------------|---------|------|----------|-------------|------------|------|------|-------|-------|
|      |                       |         |      |          | LAT         | LON        | M    | MM   | MM    | MM    |
|      |                       |         |      | ST14     | 46.96310 N  | 11.18730 E | 3142 | 1334 | -1854 | -520  |
|      |                       |         |      | ST15     | 46.96490 N  | 11.18530 E | 3195 | 1579 | -1943 | -364  |
|      |                       |         |      | ST16     | 46.96720 N  | 11.18780 E | 3252 | 1499 | -1707 | -208  |
|      |                       |         |      | ST17     | 46.94470 N  | 11.18290 E | 2891 | 1207 | -2377 | -1170 |
|      |                       |         |      | ST18     | 46.94200 N  | 11.18320 E | 2948 | 1359 | -2241 | -882  |
|      |                       |         |      | ST19     | 46.93960 N  | 11.18340 E | 2997 | 1382 | -2123 | -741  |
|      |                       |         |      | ST20     | 46.95350 N  | 11.16580 E | 3411 | 1683 | -2968 | -1285 |
|      |                       |         |      | ST21     | 46.95160 N  | 11.16570 E | 3367 | 1751 | -2869 | -1118 |
|      |                       |         |      | ST22     | 46.95740 N  | 11.17170 E | 3170 | 1188 | -901  | 287   |
|      |                       |         |      | ST23     | 46.95410 N  | 11.17540 E | 3134 | 1663 | -1220 | 443   |
| 15.2 | MALAVALLE /UEBELTALF. | IT0875  | 2007 | P01      | 46.95030 N  | 11.20230 E | 2675 |      |       | -3177 |
|      |                       |         |      | P02      | 46.94680 N  | 11.19850 E | 2729 |      |       | -2376 |
|      |                       |         |      | P03      | 46.94630 N  | 11.19330 E | 2784 |      |       | -2338 |
|      |                       |         |      | P04      | 46.94880 N  | 11.18810 E | 2827 |      |       | -1877 |
|      |                       |         |      | P05      | 46.95020 N  | 11.18480 E | 2874 |      |       | -1257 |
|      |                       |         |      | P06      | 46.95190 N  | 11.18410 E | 2927 |      |       | -2042 |
|      |                       |         |      | P07      | 46.95680 N  | 11.18380 E | 3006 |      |       | -1670 |
|      |                       |         |      | P08      | 46.95840 N  | 11.18250 E | 3036 |      |       | -448  |
|      |                       |         |      | P09      | 46.95920 N  | 11.18140 E | 3068 |      |       | -29   |
|      |                       |         |      | P10      | 46.96290 N  | 11.17780 E | 3141 |      |       | -470  |
|      |                       |         |      | P11      | 46.94340 N  | 11.19500 E | 2775 |      |       | -1931 |
|      |                       |         |      | P12      | 46.94010 N  | 11.19360 E | 2833 |      |       | -1859 |
|      |                       |         |      | P13      | 46.93700 N  | 11.19190 E | 2873 |      |       | -985  |
|      |                       |         |      | P14      | 46.96310 N  | 11.18730 E | 3142 |      |       | -466  |
|      |                       |         |      | P15      | 46.96490 N  | 11.18530 E | 3195 |      |       | -738  |
|      |                       |         |      | P16      | 46.96720 N  | 11.18780 E | 3252 |      |       | 14    |
|      |                       |         |      | P17      | 46.94470 N  | 11.18290 E | 2891 |      |       | -1490 |
|      |                       |         |      | P18      | 46.94200 N  | 11.18320 E | 2948 |      |       | -1220 |
|      |                       |         |      | P19      | 46.93960 N  | 11.18340 E | 2997 |      |       | -481  |
|      |                       |         |      | P20      | 46.95350 N  | 11.16580 E | 3411 |      |       | -834  |
|      |                       |         |      | P21      | 46.95160 N  | 11.16570 E | 3367 |      |       | -460  |
|      |                       |         |      | P22      | 46.95740 N  | 11.17170 E | 3170 |      |       | 377   |
|      |                       |         |      | P23      | 46.95410 N  | 11.17540 E | 3134 |      |       | -267  |
|      |                       |         |      | P24      | 46.96240 N  | 11.17520 E | 3155 |      |       | -330  |
|      |                       |         |      | ST01     | 46.95030 N  | 11.20230 E | 2675 | 131  | -3308 | -3177 |
|      |                       |         |      | ST02     | 46.94680 N  | 11.19850 E | 2729 | 518  | -2894 | -2376 |
|      |                       |         |      | ST03     | 46.94630 N  | 11.19330 E | 2784 | 435  | -2773 | -2338 |
|      |                       |         |      | ST04     | 46.94880 N  | 11.18810 E | 2827 | 514  | -2391 | -1877 |
|      |                       |         |      | ST05     | 46.95020 N  | 11.18480 E | 2874 | 545  | -1802 | -1257 |
|      |                       |         |      | ST06     | 46.95190 N  | 11.18410 E | 2927 | 263  | -2305 | -2042 |
|      |                       |         |      | ST07     | 46.95680 N  | 11.18380 E | 3006 | 405  | -2075 | -1670 |
|      |                       |         |      | ST08     | 46.95840 N  | 11.18250 E | 3036 | 854  | -1302 | -448  |
|      |                       |         |      | ST09     | 46.95920 N  | 11.18140 E | 3068 | 992  | -1021 | -29   |
|      |                       |         |      | ST10     | 46.96290 N  | 11.17780 E | 3141 | 119  | -589  | -470  |
|      |                       |         |      | ST11     | 46.94340 N  | 11.19500 E | 2775 | 711  | -2642 | -1931 |
|      |                       |         |      | ST12     | 46.94010 N  | 11.19360 E | 2833 | 687  | -2546 | -1859 |
|      |                       |         |      | ST13     | 46.93700 N  | 11.19190 E | 2873 | 936  | -1921 | -985  |
|      |                       |         |      | ST14     | 46.96310 N  | 11.18730 E | 3142 | 943  | -1409 | -466  |
|      |                       |         |      | ST15     | 46.96490 N  | 11.18530 E | 3195 | 903  | -1641 | -738  |
|      |                       |         |      | ST16     | 46.96720 N  | 11.18780 E | 3252 | 992  | -978  | 14    |
|      |                       |         |      | ST17     | 46.94470 N  | 11.18290 E | 2891 | 699  | -2189 | -1490 |
|      |                       |         |      | ST18     | 46.94200 N  | 11.18320 E | 2948 | 829  | -2049 | -1220 |
|      |                       |         |      | ST19     | 46.93960 N  | 11.18340 E | 2997 | 979  | -1460 | -481  |
|      |                       |         |      | ST20     | 46.95350 N  | 11.16580 E | 3411 | 821  | -1655 | -835  |
|      |                       |         |      | ST21     | 46.95160 N  | 11.16570 E | 3367 | 943  | -1403 | -460  |
|      |                       |         |      | ST22     | 46.95740 N  | 11.17170 E | 3170 | 842  | -465  | 377   |
|      |                       |         |      | ST23     | 46.95410 N  | 11.17540 E | 3134 | 926  | -1193 | -267  |
|      |                       |         |      | ST24     | 46.96240 N  | 11.17520 E | 3155 | 434  | -764  | -330  |



| NR   | GLACIER NAME            | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS    | BA    |
|------|-------------------------|---------|------|----------|-------------|------------|------|------|-------|-------|
|      |                         |         |      |          | LAT         | LOX        | M    | MM   | MM    | MM    |
| 15.3 | MALAVALLE / UEBELTALF.. | IT0875  | 2008 | ST01     | 46.95030 N  | 11.20230 E | 2675 | 439  | -3400 | -2925 |
|      |                         |         |      | ST02     | 46.94680 N  | 11.19850 E | 2729 | 996  | -2554 | -1539 |
|      |                         |         |      | ST03     | 46.94630 N  | 11.19330 E | 2784 | 1112 | -2680 | -1549 |
|      |                         |         |      | ST04     | 46.94880 N  | 11.18810 E | 2827 | 1104 | -2710 | -1586 |
|      |                         |         |      | ST05     | 46.95020 N  | 11.18480 E | 2874 | 1095 | -2303 | -1193 |
|      |                         |         |      | ST06     | 46.95190 N  | 11.18410 E | 2927 | 875  | -2181 | -1290 |
|      |                         |         |      | ST07     | 46.95680 N  | 11.18380 E | 3006 | 1019 | -2670 | -1631 |
|      |                         |         |      | ST08     | 46.95840 N  | 11.18250 E | 3036 | 1803 | -2541 | -729  |
|      |                         |         |      | ST09     | 46.95920 N  | 11.18140 E | 3068 | 1926 | -2790 | -853  |
|      |                         |         |      | ST10     | 46.96290 N  | 11.17780 E | 3141 | 1164 | -2878 | -1693 |
|      |                         |         |      | ST11     | 46.94340 N  | 11.19500 E | 2775 | 1191 | -2644 | -1435 |
|      |                         |         |      | ST12     | 46.94010 N  | 11.19360 E | 2833 | 1168 | -2307 | -1125 |
|      |                         |         |      | ST13     | 46.93700 N  | 11.19190 E | 2873 | 1215 | -2066 | -840  |
|      |                         |         |      | ST14     | 46.96310 N  | 11.18730 E | 3142 | 1213 | -2346 | -1119 |
|      |                         |         |      | ST15     | 46.96490 N  | 11.18530 E | 3195 | 1046 | -741  | 25    |
|      |                         |         |      | ST16     | 46.96720 N  | 11.18780 E | 3252 | 1201 | -2699 | -1480 |
|      |                         |         |      | ST17     | 46.94470 N  | 11.18290 E | 2891 | 1128 | -2482 | -1337 |
|      |                         |         |      | ST18     | 46.94200 N  | 11.18320 E | 2948 | 1191 | -1803 | -605  |
|      |                         |         |      | ST19     | 46.93960 N  | 11.18340 E | 2997 | 595  | -484  | 110   |
|      |                         |         |      | ST20     | 46.95350 N  | 11.16580 E | 3411 | 1059 | -946  | 112   |
|      |                         |         |      | ST21     | 46.95160 N  | 11.16570 E | 3367 | 1173 | -1015 | 156   |
|      |                         |         |      | ST22     | 46.95740 N  | 11.17170 E | 3170 | 1224 | -1289 | -64   |
|      |                         |         |      | ST23     | 46.95410 N  | 11.17540 E | 3134 | 1743 | -1736 | 7     |
|      |                         |         |      | ST24     | 46.96240 N  | 11.17520 E | 3155 | 1427 | -2152 | -716  |
| 15.4 | MALAVALLE / UEBELTALF.. | IT0875  | 2009 | ST01     | 46.95030 N  | 11.20230 E | 2675 | 1146 | -3738 | -2592 |
|      |                         |         |      | ST02     | 46.94680 N  | 11.19850 E | 2729 | 1275 | -2418 | -1143 |
|      |                         |         |      | ST03     | 46.94630 N  | 11.19330 E | 2784 | 1381 | -2587 | -1206 |
|      |                         |         |      | ST04     | 46.94880 N  | 11.18810 E | 2827 | 1532 | -2468 | -936  |
|      |                         |         |      | ST05     | 46.95020 N  | 11.18480 E | 2874 | 1288 | -2161 | -873  |
|      |                         |         |      | ST06     | 46.95190 N  | 11.18410 E | 2927 | 1393 | -2312 | -919  |
|      |                         |         |      | ST07     | 46.95680 N  | 11.18380 E | 3006 | 1540 | -2395 | -855  |
|      |                         |         |      | ST08     | 46.95840 N  | 11.18250 E | 3036 | 1451 | -1950 | -499  |
|      |                         |         |      | ST09     | 46.95920 N  | 11.18140 E | 3068 | 1708 | -900  | 808   |
|      |                         |         |      | ST10     | 46.96290 N  | 11.17780 E | 3141 | 1298 | -1829 | -531  |
|      |                         |         |      | ST11     | 46.94340 N  | 11.19500 E | 2775 | 1272 | -2046 | -774  |
|      |                         |         |      | ST12     | 46.94010 N  | 11.19360 E | 2833 | 1487 | -2117 | -630  |
|      |                         |         |      | ST13     | 46.93700 N  | 11.19190 E | 2873 | 1419 | -1545 | -126  |
|      |                         |         |      | ST14     | 46.96310 N  | 11.18730 E | 3142 | 1421 | -1467 | -46   |
|      |                         |         |      | ST15     | 46.96490 N  | 11.18530 E | 3195 | 1503 | -1900 | -397  |
|      |                         |         |      | ST16     | 46.96720 N  | 11.18780 E | 3252 | 1713 | -1173 | 540   |
|      |                         |         |      | ST17     | 46.94470 N  | 11.18290 E | 2891 | 1439 | -2150 | -711  |
|      |                         |         |      | ST18     | 46.94200 N  | 11.18320 E | 2948 | 1544 | -2056 | -512  |
|      |                         |         |      | ST19     | 46.93960 N  | 11.18340 E | 2997 | 1801 | -1778 | 23    |
|      |                         |         |      | ST20     | 46.95350 N  | 11.16580 E | 3411 | 1575 | -1612 | -37   |
|      |                         |         |      | ST21     | 46.95160 N  | 11.16570 E | 3367 | 1575 | -1621 | -46   |
|      |                         |         |      | ST22     | 46.95740 N  | 11.17170 E | 3170 | 1785 | -1180 | 605   |
|      |                         |         |      | ST23     | 46.95410 N  | 11.17540 E | 3134 | 1680 | -1142 | 538   |
|      |                         |         |      | ST24     | 46.96240 N  | 11.17520 E | 3155 | 1420 | -1314 | 106   |
| 15.5 | MALAVALLE / UEBELTALF.. | IT0875  | 2010 | ST01     | 46.95030 N  | 11.20230 E | 2675 | 150  | -2409 | -2624 |
|      |                         |         |      | ST02     | 46.94680 N  | 11.19850 E | 2729 | 984  | -2127 | -1328 |
|      |                         |         |      | ST03     | 46.94630 N  | 11.19330 E | 2784 | 1200 | -1875 | -784  |
|      |                         |         |      | ST04     | 46.94880 N  | 11.18810 E | 2827 | 989  | -1781 | -920  |
|      |                         |         |      | ST05     | 46.95020 N  | 11.18480 E | 2874 | 923  | -1697 | -899  |
|      |                         |         |      | ST06     | 46.95190 N  | 11.18410 E | 2927 | 1355 | -2039 | -794  |
|      |                         |         |      | ST07     | 46.95680 N  | 11.18380 E | 3006 | 1218 | -1686 | -544  |
|      |                         |         |      | ST08     | 46.95840 N  | 11.18250 E | 3036 | 1298 | -1879 | -805  |
|      |                         |         |      | ST09     | 46.95920 N  | 11.18140 E | 3068 | 1210 | -516  | 1053  |
|      |                         |         |      | ST10     | 46.96290 N  | 11.17780 E | 3141 | 1058 | -1547 | -434  |
|      |                         |         |      | ST11     | 46.94340 N  | 11.19500 E | 2775 | 1138 | -1786 | -753  |

| NR   | GLACIER NAME           | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW   | BS    | BA    |
|------|------------------------|---------|------|----------|-------------|------------|------|------|-------|-------|
|      |                        |         |      |          | LAT         | LON        | M    | MM   | MM    | MM    |
| 16.1 | PENDENTE / HANGENDERF. | IT0876  | 2006 | ST12     | 46.94010 N  | 11.19360 E | 2833 | 1214 | -1879 | -772  |
|      |                        |         |      | ST13     | 46.93700 N  | 11.19190 E | 2873 | 1491 | -1706 | -250  |
|      |                        |         |      | ST14     | 46.96310 N  | 11.18730 E | 3142 | 1365 | -1221 | 281   |
|      |                        |         |      | ST15     | 46.96490 N  | 11.18530 E | 3195 | 1316 | -1396 | 51    |
|      |                        |         |      | ST16     | 46.96720 N  | 11.18780 E | 3252 | 1492 | -394  | 1692  |
|      |                        |         |      | ST17     | 46.94470 N  | 11.18290 E | 2891 | 1310 | -1706 | -460  |
|      |                        |         |      | ST18     | 46.94200 N  | 11.18320 E | 2948 | 1428 | -1824 | -460  |
|      |                        |         |      | ST19     | 46.93960 N  | 11.18340 E | 2997 | 1639 | -1730 | -77   |
|      |                        |         |      | ST20     | 46.95350 N  | 11.16580 E | 3411 | 1165 | -274  | 491   |
|      |                        |         |      | ST21     | 46.95160 N  | 11.16570 E | 3367 | 1312 | -959  | 358   |
|      |                        |         |      | ST22     | 46.95740 N  | 11.17170 E | 3170 | 1114 | -495  | 958   |
|      |                        |         |      | ST23     | 46.95410 N  | 11.17540 E | 3134 | 1325 | -942  | 645   |
|      |                        |         |      | ST24     | 46.96240 N  | 11.17520 E | 3155 | 1198 | -702  | 767   |
|      |                        |         |      | P48      | 46.96590 N  | 11.21900 E | 2828 |      |       | 2160  |
|      |                        |         |      | P49      | 46.96510 N  | 11.21760 E | 2860 |      |       | -1467 |
|      |                        |         |      | P76      | 46.96540 N  | 11.23250 E | 2813 |      |       | -2178 |
|      |                        |         |      | P79      | 46.96300 N  | 11.22470 E | 2690 |      |       | -2142 |
|      |                        |         |      | P80      | 46.96470 N  | 11.22480 E | 2714 |      |       | -1485 |
|      |                        |         |      | P81      | 46.96670 N  | 11.22490 E | 2735 |      |       | -1800 |
|      |                        |         |      | P82      | 46.96060 N  | 11.22230 E | 2749 |      |       | -2160 |
|      |                        |         |      | P84      | 46.96400 N  | 11.21590 E | 2877 |      |       | -1325 |
|      |                        |         |      | P85      | 46.96650 N  | 11.22950 E | 2775 |      |       | -2034 |
|      |                        |         |      | P86      | 46.96600 N  | 11.23380 E | 2841 |      |       | -2115 |
|      |                        |         |      | ST48     | 46.96590 N  | 11.21900 E | 2828 | 1546 | -3706 | -2160 |
|      |                        |         |      | ST49     | 46.96510 N  | 11.21760 E | 2860 | 1779 | -3246 | -1467 |
|      |                        |         |      | ST76     | 46.96540 N  | 11.23250 E | 2813 | 1471 | -3649 | -2178 |
|      |                        |         |      | ST79     | 46.96300 N  | 11.22470 E | 2690 | 1029 | -3171 | -2142 |
|      |                        |         |      | ST80     | 46.96470 N  | 11.22480 E | 2714 | 1282 | -2767 | -1485 |
| 16.2 | PENDENTE / HANGENDERF. | IT0876  | 2007 | ST81     | 46.96670 N  | 11.22480 E | 2735 | 1377 | -3177 | -1800 |
|      |                        |         |      | ST82     | 46.96600 N  | 11.22230 E | 2749 | 1582 | -3742 | -2160 |
|      |                        |         |      | ST84     | 46.96400 N  | 11.21590 E | 2877 | 1831 | -3156 | -128  |
|      |                        |         |      | ST85     | 46.96650 N  | 11.22950 E | 2775 | 1333 | -3367 | -2034 |
|      |                        |         |      | ST86     | 46.96600 N  | 11.23380 E | 2841 | 1586 | -3701 | -2115 |
|      |                        |         |      | P48      | 46.96590 N  | 11.21900 E | 2828 |      |       | -445  |
|      |                        |         |      | P49      | 46.96510 N  | 11.21760 E | 2860 |      |       | -785  |
|      |                        |         |      | P76      | 46.96540 N  | 11.23250 E | 2813 |      |       | -960  |
|      |                        |         |      | P79      | 46.96300 N  | 11.22470 E | 2690 |      |       | -1863 |
|      |                        |         |      | P80      | 46.96470 N  | 11.22480 E | 2714 |      |       | -1440 |
|      |                        |         |      | P81      | 46.96670 N  | 11.22490 E | 2735 |      |       | -1021 |
|      |                        |         |      | P82      | 46.96060 N  | 11.22230 E | 2749 |      |       | -929  |
|      |                        |         |      | P84      | 46.96400 N  | 11.21590 E | 2877 |      |       | -401  |
|      |                        |         |      | P85      | 46.96650 N  | 11.22950 E | 2775 |      |       | -992  |
|      |                        |         |      | P86      | 46.96600 N  | 11.23380 E | 2841 |      |       | -1067 |
|      |                        |         |      | ST48     | 46.96590 N  | 11.21900 E | 2828 | 1461 | -3126 | -1665 |
|      |                        |         |      | ST49     | 46.96510 N  | 11.21760 E | 2860 | 1719 | -3032 | -1313 |
|      |                        |         |      | ST76     | 46.96540 N  | 11.23250 E | 2813 | 1336 | -2620 | -1284 |
|      |                        |         |      | ST79     | 46.96300 N  | 11.22470 E | 2690 | 251  | -3479 | -3228 |
|      |                        |         |      | ST80     | 46.96470 N  | 11.22480 E | 2714 | 457  | -3199 | -2742 |
|      |                        |         |      | ST81     | 46.96670 N  | 11.22480 E | 2735 | 1236 | -2739 | -1503 |
|      |                        |         |      | ST82     | 46.96600 N  | 11.22230 E | 2749 | 1393 | -2694 | -1301 |
|      |                        |         |      | ST84     | 46.96400 N  | 11.21590 E | 2877 | 1537 | -2595 | -1058 |
|      |                        |         |      | ST85     | 46.96650 N  | 11.22950 E | 2775 | 1445 | -3176 | -1731 |
|      |                        |         |      | ST86     | 46.96600 N  | 11.23380 E | 2841 | 1282 | -2879 | -1597 |
| 16.3 | PENDENTE / HANGENDERF. | IT0876  | 2008 | ST48     | 46.96590 N  | 11.21900 E | 2828 | 1649 | -3108 | -1459 |
|      |                        |         |      | ST49     | 46.96510 N  | 11.21760 E | 2860 | 1941 | -3192 | -1251 |
|      |                        |         |      | ST76     | 46.96540 N  | 11.23250 E | 2813 | 1512 | -2817 | -1305 |
|      |                        |         |      | ST79     | 46.96300 N  | 11.22470 E | 2690 | 1207 | -3286 | -2079 |
|      |                        |         |      | ST80     | 46.96470 N  | 11.22480 E | 2714 | 1329 | -3408 | -2079 |



| NR   | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|------|--------------|---------|------|----------|-------------|------------|------|----|----|-------|
|      |              |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|      |              |         |      | 12       | 44.07171 S  | 169.4352 E | 1883 |    |    | 106   |
|      |              |         |      | 12A      | 44.07159 S  | 169.4328 E | 1896 |    |    | 13    |
|      |              |         |      | 12B      | 44.07162 S  | 169.4341 E | 1893 |    |    | -89   |
|      |              |         |      | 12C      | 44.07139 S  | 169.4365 E | 1903 |    |    | -10   |
|      |              |         |      | 12D      | 44.07106 S  | 169.4377 E | 1908 |    |    | 241   |
|      |              |         |      | 15       | 44.06903 S  | 169.4353 E | 1914 |    |    | 78    |
|      |              |         |      | 16       | 44.06823 S  | 169.4353 E | 1927 |    |    | 221   |
|      |              |         |      | 17       | 44.06727 S  | 169.4353 E | 1937 |    |    | 310   |
|      |              |         |      | 18       | 44.06637 S  | 169.4350 E | 1939 |    |    | 731   |
|      |              |         |      | 4        | 44.07876 S  | 169.4341 E | 1774 |    |    | -1161 |
|      |              |         |      | 5        | 44.07790 S  | 169.4347 E | 1784 |    |    | -834  |
|      |              |         |      | 6        | 44.07698 S  | 169.4354 E | 1807 |    |    | -505  |
|      |              |         |      | 6A       | 44.07672 S  | 169.4329 E | 1819 |    |    | -1048 |
|      |              |         |      | 6B       | 44.07689 S  | 169.4341 E | 1815 |    |    | -1094 |
|      |              |         |      | 6C       | 44.07700 S  | 169.4366 E | 1819 |    |    | -201  |
|      |              |         |      | 6D       | 44.07700 S  | 169.4379 E | 1827 |    |    | 150   |
|      |              |         |      | 7        | 44.07613 S  | 169.4353 E | 1827 |    |    | -246  |
|      |              |         |      | 8        | 44.07528 S  | 169.4353 E | 1838 |    |    | -59   |
|      |              |         |      | 9        | 44.07438 S  | 169.4354 E | 1855 |    |    | 196   |
|      |              |         |      | A1       | 44.08083 S  | 169.4328 E | 1730 |    |    | -2240 |
|      |              |         |      | A2       | 44.07922 S  | 169.4345 E | 1766 |    |    | -1596 |
|      |              |         |      | A5       | 44.07988 S  | 169.4327 E | 1747 |    |    | -2476 |
|      |              |         |      | A6       | 44.08091 S  | 169.4346 E | 1710 |    |    | -1531 |
|      |              |         |      | A7       | 44.08045 S  | 169.4335 E | 1747 |    |    | -2142 |
|      |              |         |      | SP0      | 44.08193 S  | 169.4316 E | 1696 |    |    | 916   |
|      |              |         |      | SP1      | 44.08123 S  | 169.4323 E | 1705 |    |    | 994   |
|      |              |         |      | SP12     | 44.07171 S  | 169.4352 E | 1890 |    |    | 2337  |
|      |              |         |      | SP6      | 44.07698 S  | 169.4354 E | 1801 |    |    | 2112  |
| 18.2 | BREWSTER     | NZ      | 2007 | 0        | 44.08193 S  | 169.4316 E | 1696 |    |    | -4581 |
|      |              |         |      | 10       | 44.07351 S  | 169.4354 E | 1869 |    |    | -646  |
|      |              |         |      | 10A      | 44.07297 S  | 169.433 E  | 1881 |    |    | 57    |
|      |              |         |      | 10B      | 44.07323 S  | 169.4342 E | 1876 |    |    | -262  |
|      |              |         |      | 10C      | 44.07342 S  | 169.4366 E | 1880 |    |    | -159  |
|      |              |         |      | 10D      | 44.07310 S  | 169.4378 E | 1880 |    |    | 23    |
|      |              |         |      | 11       | 44.07261 S  | 169.4353 E | 1877 |    |    | -692  |
|      |              |         |      | 12       | 44.07171 S  | 169.4352 E | 1883 |    |    | -297  |
|      |              |         |      | 12A      | 44.07159 S  | 169.4328 E | 1896 |    |    | -87   |
|      |              |         |      | 12B      | 44.07162 S  | 169.4341 E | 1893 |    |    | -154  |
|      |              |         |      | 12C      | 44.07139 S  | 169.4365 E | 1903 |    |    | 110   |
|      |              |         |      | 12D      | 44.07106 S  | 169.4377 E | 1908 |    |    | 37    |
|      |              |         |      | 14       | 44.06993 S  | 169.4353 E | 1911 |    |    | -29   |
|      |              |         |      | 15       | 44.06903 S  | 169.4353 E | 1914 |    |    | 291   |
|      |              |         |      | 16       | 44.06823 S  | 169.4353 E | 1927 |    |    | 100   |
|      |              |         |      | 17       | 44.06727 S  | 169.4353 E | 1937 |    |    | 217   |
|      |              |         |      | 19       | 44.06769 S  | 169.4318 E | 1920 |    |    | -108  |
|      |              |         |      | 3        | 44.07958 S  | 169.4335 E | 1762 |    |    | -2965 |
|      |              |         |      | 4        | 44.07876 S  | 169.4341 E | 1774 |    |    | -2303 |
|      |              |         |      | 5        | 44.07790 S  | 169.4347 E | 1784 |    |    | -1719 |
|      |              |         |      | 6A       | 44.07672 S  | 169.4329 E | 1819 |    |    | -2554 |
|      |              |         |      | 6C       | 44.07700 S  | 169.4366 E | 1819 |    |    | -1243 |
|      |              |         |      | 6D       | 44.07700 S  | 169.4379 E | 1827 |    |    | -24   |
|      |              |         |      | 8        | 44.07528 S  | 169.4353 E | 1838 |    |    | -949  |
|      |              |         |      | 9        | 44.07438 S  | 169.4354 E | 1855 |    |    | -197  |
|      |              |         |      | A1       | 44.08083 S  | 169.4328 E | 1730 |    |    | -3484 |
|      |              |         |      | A2       | 44.07922 S  | 169.4345 E | 1766 |    |    | -2716 |
|      |              |         |      | A4       | 44.07529 S  | 169.4353 E | 1857 |    |    | -43   |
|      |              |         |      | A5       | 44.07988 S  | 169.4327 E | 1747 |    |    | -3128 |
|      |              |         |      | A6       | 44.08091 S  | 169.4346 E | 1710 |    |    | -1729 |
|      |              |         |      | A7       | 44.08045 S  | 169.4335 E | 1747 |    |    | -3961 |
|      |              |         |      | SP1      | 44.08123 S  | 169.4323 E | 1705 |    |    | 1776  |

| NR   | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|------|--------------|---------|------|----------|-------------|------------|------|----|----|-------|
|      |              |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|      |              |         |      | SP12     | 44.07171 S  | 169.4352 E | 1890 |    |    | 2704  |
|      |              |         |      | SP23     | 44.06668 S  | 169.4467 E | 2312 |    |    | 4010  |
|      |              |         |      | SP6      | 44.07698 S  | 169.4354 E | 1801 |    |    | 2607  |
| 18.3 | BREWSTER     | NZ      | 2008 | 0        | 44.08193 S  | 169.4316 E | 1696 |    |    | -4752 |
|      |              |         |      | 10       | 44.07351 S  | 169.4354 E | 1869 |    |    | -2445 |
|      |              |         |      | 10B      | 44.07323 S  | 169.4342 E | 1876 |    |    | -1803 |
|      |              |         |      | 10D      | 44.07310 S  | 169.4378 E | 1880 |    |    | -1864 |
|      |              |         |      | 12       | 44.07171 S  | 169.4352 E | 1883 |    |    | -2116 |
|      |              |         |      | 12A      | 44.07159 S  | 169.4328 E | 1896 |    |    | -2207 |
|      |              |         |      | 12B      | 44.07162 S  | 169.4341 E | 1893 |    |    | -375  |
|      |              |         |      | 12C      | 44.07139 S  | 169.4365 E | 1903 |    |    | -2149 |
|      |              |         |      | 12D      | 44.07106 S  | 169.4377 E | 1896 |    |    | -1896 |
|      |              |         |      | 13       | 44.07084 S  | 169.4352 E | 1900 |    |    | -2291 |
|      |              |         |      | 14       | 44.06993 S  | 169.4353 E | 1911 |    |    | -2279 |
|      |              |         |      | 15       | 44.06903 S  | 169.4353 E | 1914 |    |    | -1486 |
|      |              |         |      | 16       | 44.06823 S  | 169.4353 E | 1927 |    |    | -2315 |
|      |              |         |      | 19       | 44.06769 S  | 169.4318 E | 1920 |    |    | -2422 |
|      |              |         |      | 2        | 44.08054 S  | 169.4331 E | 1748 |    |    | -3528 |
|      |              |         |      | 3        | 44.07958 S  | 169.4335 E | 1762 |    |    | -3068 |
|      |              |         |      | 4        | 44.07876 S  | 169.4341 E | 1774 |    |    | -4968 |
|      |              |         |      | 5        | 44.07790 S  | 169.4347 E | 1784 |    |    | -1855 |
|      |              |         |      | 6        | 44.07698 S  | 169.4354 E | 1807 |    |    | -2904 |
|      |              |         |      | 6A       | 44.07672 S  | 169.4329 E | 1819 |    |    | -3560 |
|      |              |         |      | 6D       | 44.07700 S  | 169.4379 E | 1827 |    |    | -3070 |
|      |              |         |      | 7        | 44.07613 S  | 169.4353 E | 1827 |    |    | -1041 |
|      |              |         |      | 8        | 44.07528 S  | 169.4353 E | 1838 |    |    | -3294 |
|      |              |         |      | 9        | 44.07438 S  | 169.4354 E | 1855 |    |    | -3139 |
|      |              |         |      | A2       | 44.07922 S  | 169.4345 E | 1766 |    |    | -4447 |
|      |              |         |      | A3       | 44.07702 S  | 169.4355 E | 1827 |    |    | -2865 |
|      |              |         |      | A4       | 44.07529 S  | 169.4353 E | 1857 |    |    | -3747 |
|      |              |         |      | A5       | 44.07988 S  | 169.4327 E | 1747 |    |    | -3743 |
|      |              |         |      | A6       | 44.08091 S  | 169.4346 E | 1710 |    |    | -4373 |
|      |              |         |      | A7       | 44.08045 S  | 169.4335 E | 1747 |    |    | -4187 |
|      |              |         |      | old10C   | 44.07342 S  | 169.4366 E | 1880 |    |    | -929  |
|      |              |         |      | old10D   | 44.07310 S  | 169.4378 E | 1880 |    |    | -1278 |
|      |              |         |      | old12D   | 44.07106 S  | 169.4377 E | 1908 |    |    | -1400 |
|      |              |         |      | old4     | 44.07876 S  | 169.4341 E | 1774 |    |    | -3641 |
|      |              |         |      | old6A    | 44.07672 S  | 169.4329 E | 1819 |    |    | -2669 |
|      |              |         |      | old6C    | 44.07700 S  | 169.4366 E | 1819 |    |    | -2725 |
|      |              |         |      | S1       | 44.06907 S  | 169.4425 E | 2000 |    |    | 3005  |
|      |              |         |      | S10      | 44.06864 S  | 169.4288 E | 1965 |    |    | 2530  |
|      |              |         |      | S11      | 44.06603 S  | 169.4302 E | 1940 |    |    | 2710  |
|      |              |         |      | S118     | 44.08041 S  | 169.4330 E | 1743 |    |    | 1300  |
|      |              |         |      | S12      | 44.06606 S  | 169.4314 E | 1952 |    |    | 2315  |
|      |              |         |      | S120     | 44.08047 S  | 169.4332 E | 1749 |    |    | 1150  |
|      |              |         |      | S123     | 44.08064 S  | 169.4333 E | 1746 |    |    | 1250  |
|      |              |         |      | S124     | 44.08072 S  | 169.4335 E | 1748 |    |    | 1200  |
|      |              |         |      | S125     | 44.08081 S  | 169.4336 E | 1748 |    |    | 1200  |
|      |              |         |      | S126     | 44.08091 S  | 169.4338 E | 1754 |    |    | 1350  |
|      |              |         |      | S127     | 44.08102 S  | 169.4340 E | 1746 |    |    | 1300  |
|      |              |         |      | S128     | 44.08102 S  | 169.4342 E | 1746 |    |    | 1400  |
|      |              |         |      | S129     | 44.08110 S  | 169.4344 E | 1779 |    |    | 1600  |
|      |              |         |      | S13      | 44.06622 S  | 169.4327 E | 1957 |    |    | 2825  |
|      |              |         |      | S130     | 44.08120 S  | 169.4346 E | 1782 |    |    | 1550  |
|      |              |         |      | S131     | 44.08127 S  | 169.4348 E | 1773 |    |    | 1300  |
|      |              |         |      | S132     | 44.08134 S  | 169.4349 E | 1766 |    |    | 1525  |
|      |              |         |      | S133     | 44.08028 S  | 169.4328 E | 1749 |    |    | 1375  |
|      |              |         |      | S135     | 44.08011 S  | 169.4326 E | 1743 |    |    | 1330  |
|      |              |         |      | S136     | 44.08003 S  | 169.4324 E | 1743 |    |    | 1470  |
|      |              |         |      | S137     | 44.07993 S  | 169.4321 E | 1741 |    |    | 1360  |

| NR | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA   |
|----|--------------|---------|------|----------|-------------|------------|------|----|----|------|
|    |              |         |      |          | LAT         | LON        | M    | MM | MM | MM   |
|    |              |         |      | S14      | 44.06631 S  | 169.4339 E | 1960 |    |    | 2640 |
|    |              |         |      | S140     | 44.07990 S  | 169.4318 E | 1742 |    |    | 1310 |
|    |              |         |      | S141     | 44.07980 S  | 169.4316 E | 1738 |    |    | 1295 |
|    |              |         |      | S142     | 44.07972 S  | 169.4313 E | 1736 |    |    | 1310 |
|    |              |         |      | S143     | 44.08046 S  | 169.4329 E | 1739 |    |    | 1225 |
|    |              |         |      | S144     | 44.08060 S  | 169.4328 E | 1737 |    |    | 1360 |
|    |              |         |      | S145     | 44.08079 S  | 169.4326 E | 1731 |    |    | 1165 |
|    |              |         |      | S146     | 44.08091 S  | 169.4325 E | 1723 |    |    | 1230 |
|    |              |         |      | S148     | 44.08111 S  | 169.4323 E | 1721 |    |    | 1245 |
|    |              |         |      | S149     | 44.08129 S  | 169.4322 E | 1714 |    |    | 1180 |
|    |              |         |      | S15      | 44.06625 S  | 169.4352 E | 1956 |    |    | 2670 |
|    |              |         |      | S150     | 44.08155 S  | 169.4320 E | 1709 |    |    | 1175 |
|    |              |         |      | S151     | 44.08173 S  | 169.4318 E | 1696 |    |    | 1425 |
|    |              |         |      | S152     | 44.08189 S  | 169.4316 E | 1683 |    |    | 1220 |
|    |              |         |      | S153     | 44.08186 S  | 169.4313 E | 1687 |    |    | 970  |
|    |              |         |      | S154     | 44.08174 S  | 169.4310 E | 1686 |    |    | 430  |
|    |              |         |      | S155     | 44.08197 S  | 169.4317 E | 1689 |    |    | 900  |
|    |              |         |      | S156     | 44.08205 S  | 169.4319 E | 1691 |    |    | 1225 |
|    |              |         |      | S157     | 44.08210 S  | 169.4320 E | 1691 |    |    | 925  |
|    |              |         |      | S158     | 44.08216 S  | 169.4323 E | 1685 |    |    | 1185 |
|    |              |         |      | S159     | 44.08224 S  | 169.4324 E | 1685 |    |    | 1170 |
|    |              |         |      | S16      | 44.06635 S  | 169.4364 E | 1957 |    |    | 2750 |
|    |              |         |      | S160     | 44.08234 S  | 169.4325 E | 1686 |    |    | 815  |
|    |              |         |      | S161     | 44.08242 S  | 169.4326 E | 1688 |    |    | 935  |
|    |              |         |      | S17      | 44.06646 S  | 169.4377 E | 1962 |    |    | 3150 |
|    |              |         |      | S18      | 44.06631 S  | 169.4389 E | 1982 |    |    | 3180 |
|    |              |         |      | S19      | 44.07166 S  | 169.4352 E | 1897 |    |    | 2310 |
|    |              |         |      | S2       | 44.06902 S  | 169.4413 E | 1973 |    |    | 3065 |
|    |              |         |      | S20      | 44.07158 S  | 169.4338 E | 1898 |    |    | 2400 |
|    |              |         |      | S21      | 44.07153 S  | 169.4326 E | 1902 |    |    | 2350 |
|    |              |         |      | S22      | 44.07150 S  | 169.4313 E | 1913 |    |    | 2350 |
|    |              |         |      | S23      | 44.07143 S  | 169.4301 E | 1925 |    |    | 2345 |
|    |              |         |      | S24      | 44.07136 S  | 169.4289 E | 1944 |    |    | 2170 |
|    |              |         |      | S25      | 44.07130 S  | 169.4276 E | 1965 |    |    | 2160 |
|    |              |         |      | S26      | 44.07115 S  | 169.4263 E | 2001 |    |    | 2665 |
|    |              |         |      | S27      | 44.06958 S  | 169.4281 E | 1974 |    |    | 2660 |
|    |              |         |      | S28      | 44.06965 S  | 169.4293 E | 1953 |    |    | 2460 |
|    |              |         |      | S29      | 44.06970 S  | 169.4306 E | 1935 |    |    | 2365 |
|    |              |         |      | S3       | 44.06904 S  | 169.4400 E | 1952 |    |    | 2585 |
|    |              |         |      | S30      | 44.06977 S  | 169.4318 E | 1920 |    |    | 2425 |
|    |              |         |      | S31      | 44.06979 S  | 169.4331 E | 1914 |    |    | 2300 |
|    |              |         |      | S32      | 44.06984 S  | 169.4343 E | 1915 |    |    | 2250 |
|    |              |         |      | S33      | 44.06987 S  | 169.4356 E | 1917 |    |    | 2265 |
|    |              |         |      | S34      | 44.06993 S  | 169.4368 E | 1922 |    |    | 2275 |
|    |              |         |      | S35      | 44.07005 S  | 169.4381 E | 1920 |    |    | 2540 |
|    |              |         |      | S36      | 44.07019 S  | 169.4393 E | 1928 |    |    | 2420 |
|    |              |         |      | S37      | 44.07030 S  | 169.4406 E | 1948 |    |    | 3125 |
|    |              |         |      | S38      | 44.07160 S  | 169.4415 E | 1955 |    |    | 3265 |
|    |              |         |      | S39      | 44.07178 S  | 169.4401 E | 1915 |    |    | 2535 |
|    |              |         |      | S4       | 44.06869 S  | 169.4375 E | 1929 |    |    | 2520 |
|    |              |         |      | S40      | 44.07175 S  | 169.4389 E | 1905 |    |    | 2540 |
|    |              |         |      | S41      | 44.07175 S  | 169.4377 E | 1903 |    |    | 2315 |
|    |              |         |      | S42      | 44.07170 S  | 169.4364 E | 1902 |    |    | 2340 |
|    |              |         |      | S43      | 44.06444 S  | 169.4348 E | 2007 |    |    | 2025 |
|    |              |         |      | S44      | 44.07135 S  | 169.4456 E | 2082 |    |    | 2510 |
|    |              |         |      | S45      | 44.07140 S  | 169.4469 E | 2082 |    |    | 2375 |
|    |              |         |      | S46      | 44.07143 S  | 169.4481 E | 2082 |    |    | 2940 |
|    |              |         |      | S47      | 44.06444 S  | 169.4348 E | 2010 |    |    | 2505 |
|    |              |         |      | S48      | 44.06522 S  | 169.4350 E | 1993 |    |    | 2675 |
|    |              |         |      | S49      | 44.06624 S  | 169.4352 E | 1958 |    |    | 2550 |
|    |              |         |      | S5       | 44.06872 S  | 169.4363 E | 1928 |    |    | 2400 |

| NR   | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA    |
|------|--------------|---------|------|----------|-------------|------------|------|----|----|-------|
|      |              |         |      |          | LAT         | LON        | M    | MM | MM | MM    |
|      |              |         |      | S50      | 44.06708 S  | 169.4351 E | 1947 |    |    | 2515  |
|      |              |         |      | S51      | 44.06788 S  | 169.4351 E | 1943 |    |    | 2325  |
|      |              |         |      | S52      | 44.06894 S  | 169.4352 E | 1928 |    |    | 1985  |
|      |              |         |      | S53      | 44.06980 S  | 169.4351 E | 1920 |    |    | 2535  |
|      |              |         |      | S54      | 44.07070 S  | 169.4350 E | 1910 |    |    | 2300  |
|      |              |         |      | S55      | 44.07247 S  | 169.4353 E | 1889 |    |    | 2270  |
|      |              |         |      | S56      | 44.07341 S  | 169.4352 E | 1876 |    |    | 2480  |
|      |              |         |      | S57      | 44.07341 S  | 169.4339 E | 1870 |    |    | 2300  |
|      |              |         |      | S58      | 44.07349 S  | 169.4326 E | 1870 |    |    | 2315  |
|      |              |         |      | S59      | 44.07337 S  | 169.4314 E | 1879 |    |    | 2265  |
|      |              |         |      | S6       | 44.06870 S  | 169.4350 E | 1924 |    |    | 2150  |
|      |              |         |      | S60      | 44.07324 S  | 169.4302 E | 1888 |    |    | 2175  |
|      |              |         |      | S61      | 44.07327 S  | 169.4289 E | 1910 |    |    | 2255  |
|      |              |         |      | S62      | 44.07362 S  | 169.4366 E | 1880 |    |    | 2400  |
|      |              |         |      | S63      | 44.07357 S  | 169.4379 E | 1829 |    |    | 2375  |
|      |              |         |      | S64      | 44.07360 S  | 169.4391 E | 1877 |    |    | 2350  |
|      |              |         |      | S65      | 44.07439 S  | 169.4353 E | 2161 |    |    | 2300  |
|      |              |         |      | S66      | 44.07537 S  | 169.4353 E | 2008 |    |    | 2260  |
|      |              |         |      | S67      | 44.07524 S  | 169.4339 E | 2003 |    |    | 2275  |
|      |              |         |      | S68      | 44.07530 S  | 169.4328 E | 1999 |    |    | 2275  |
|      |              |         |      | S69      | 44.07517 S  | 169.4315 E | 2005 |    |    | 2255  |
|      |              |         |      | S7       | 44.06873 S  | 169.4338 E | 1918 |    |    | 2130  |
|      |              |         |      | S70      | 44.07522 S  | 169.4303 E | 2034 |    |    | 2325  |
|      |              |         |      | S71      | 44.07542 S  | 169.4366 E | 1848 |    |    | 2150  |
|      |              |         |      | S72      | 44.07545 S  | 169.4376 E | 1842 |    |    | 2210  |
|      |              |         |      | S73      | 44.07549 S  | 169.4389 E | 1840 |    |    | 2480  |
|      |              |         |      | S74      | 44.07610 S  | 169.4353 E | 1840 |    |    | 2230  |
|      |              |         |      | S75      | 44.07694 S  | 169.4354 E | 1816 |    |    | 2185  |
|      |              |         |      | S76      | 44.07661 S  | 169.4339 E | 1818 |    |    | 1990  |
|      |              |         |      | S77      | 44.07638 S  | 169.4327 E | 1823 |    |    | 1800  |
|      |              |         |      | S78      | 44.07616 S  | 169.4315 E | 1824 |    |    | 2075  |
|      |              |         |      | S79      | 44.07724 S  | 169.4370 E | 1801 |    |    | 2100  |
|      |              |         |      | S8       | 44.06884 S  | 169.4312 E | 1919 |    |    | 2435  |
|      |              |         |      | S80      | 44.07750 S  | 169.4382 E | 1802 |    |    | 2350  |
|      |              |         |      | S81      | 44.07761 S  | 169.4391 E | 1819 |    |    | 2375  |
|      |              |         |      | S82      | 44.07819 S  | 169.4350 E | 1793 |    |    | 1900  |
|      |              |         |      | S83      | 44.07899 S  | 169.4345 E | 1784 |    |    | 1675  |
|      |              |         |      | S84      | 44.07852 S  | 169.4331 E | 1780 |    |    | 1710  |
|      |              |         |      | S85      | 44.07813 S  | 169.4321 E | 1777 |    |    | 1710  |
|      |              |         |      | S86      | 44.07805 S  | 169.4318 E | 1776 |    |    | 1660  |
|      |              |         |      | S87      | 44.07927 S  | 169.4358 E | 1780 |    |    | 1800  |
|      |              |         |      | S88      | 44.07938 S  | 169.4373 E | 1780 |    |    | 1540  |
|      |              |         |      | S9       | 44.06880 S  | 169.4300 E | 1943 |    |    | 2380  |
|      |              |         |      | SP0      | 44.08193 S  | 169.4316 E | 1696 |    |    | 915   |
|      |              |         |      | SP12     | 44.07171 S  | 169.4352 E | 1890 |    |    | 2300  |
|      |              |         |      | SP6      | 44.07698 S  | 169.4354 E | 1801 |    |    | 2126  |
| 18.4 | BREWSTER     | NZ      | 2009 | 0        | 44.08193 S  | 169.4316 E | 1696 |    |    | -4404 |
|      |              |         |      | 12       | 44.07171 S  | 169.4352 E | 1883 |    |    | -3415 |
|      |              |         |      | 12D      | 44.07106 S  | 169.4377 E | 1896 |    |    | -2928 |
|      |              |         |      | 14       | 44.06993 S  | 169.4353 E | 1911 |    |    | -3052 |
|      |              |         |      | 16       | 44.06823 S  | 169.4353 E | 1927 |    |    | -3139 |
|      |              |         |      | 18       | 44.06637 S  | 169.4350 E | 1939 |    |    | -2700 |
|      |              |         |      | 19       | 44.06769 S  | 169.4318 E | 1920 |    |    | -3144 |
|      |              |         |      | 2        | 44.08054 S  | 169.4331 E | 1748 |    |    | -3250 |
|      |              |         |      | 2A       | 44.08004 S  | 169.4321 E | 1732 |    |    | -3981 |
|      |              |         |      | 4        | 44.07876 S  | 169.4341 E | 1774 |    |    | -3039 |
|      |              |         |      | 6        | 44.07698 S  | 169.4354 E | 1807 |    |    | -3312 |
|      |              |         |      | 6D       | 44.07700 S  | 169.4379 E | 1827 |    |    | -2973 |
|      |              |         |      | 8        | 44.07528 S  | 169.4353 E | 1838 |    |    | -3003 |
|      |              |         |      | R01      | 44.08168 S  | 169.4321 E | 1698 |    |    | 594   |

| NR | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |            | ELEV | BW | BS | BA   |
|----|--------------|---------|------|----------|-------------|------------|------|----|----|------|
|    |              |         |      |          | LAT         | LON        | M    | MM | MM | MM   |
|    |              |         |      | R01-2    | 44.08128 S  | 169.4323 E | 1697 |    |    | 924  |
|    |              |         |      | R01L     | 44.08126 S  | 169.4314 E | 1699 |    |    | 755  |
|    |              |         |      | R01R     | 44.08175 S  | 169.4329 E | 1703 |    |    | 447  |
|    |              |         |      | R02      | 44.08099 S  | 169.4327 E | 1725 |    |    | 904  |
|    |              |         |      | R03      | 44.07968 S  | 169.4339 E | 1755 |    |    | 984  |
|    |              |         |      | R04      | 44.07757 S  | 169.4342 E | 1784 |    |    | 1530 |
|    |              |         |      | R04-5    | 44.07684 S  | 169.4342 E | 1809 |    |    | 1457 |
|    |              |         |      | R05      | 44.07558 S  | 169.4347 E | 1834 |    |    | 1718 |
|    |              |         |      | R051     | 44.07421 S  | 169.4350 E | 1854 |    |    | 1838 |
|    |              |         |      | R06      | 44.07238 S  | 169.4352 E | 1877 |    |    | 1768 |
|    |              |         |      | R07      | 44.06671 S  | 169.4353 E | 1929 |    |    | 2128 |
|    |              |         |      | R08      | 44.06847 S  | 169.4326 E | 1904 |    |    | 1953 |
|    |              |         |      | R09      | 44.06890 S  | 169.4291 E | 1954 |    |    | 2017 |
|    |              |         |      | R10      | 44.07339 S  | 169.4278 E | 1920 |    |    | 1874 |
|    |              |         |      | R11      | 44.07107 S  | 169.4407 E | 1921 |    |    | 1940 |
|    |              |         |      | R12      | 44.07923 S  | 169.4316 E | 1747 |    |    | 1059 |
|    |              |         |      | R13      | 44.08008 S  | 169.4362 E | 1767 |    |    | 1216 |
|    |              |         |      | R14      | 44.07740 S  | 169.4318 E | 1782 |    |    | 1352 |
|    |              |         |      | R15      | 44.07704 S  | 169.4377 E | 1812 |    |    | 2481 |
|    |              |         |      | RBRI     | 44.07883 S  | 169.4340 E | 1774 |    |    | 1191 |
|    |              |         |      | S01      | 44.07984 S  | 169.4350 E | 1763 |    |    | 1211 |
|    |              |         |      | S02      | 44.07938 S  | 169.4327 E | 1753 |    |    | 1170 |
|    |              |         |      | SP0      | 44.08195 S  | 169.4316 E | 1685 |    |    | 300  |
|    |              |         |      | SP12     | 44.07171 S  | 169.4352 E | 1883 |    |    | 2041 |
|    |              |         |      | SP2      | 44.08102 S  | 169.4327 E | 1732 |    |    | 1136 |
|    |              |         |      | SP4      | 44.07888 S  | 169.4340 E | 1780 |    |    | 1232 |
|    |              |         |      | T01      | 44.07737 S  | 169.4330 E | 1793 |    |    | 1356 |
|    |              |         |      | T02      | 44.07734 S  | 169.4354 E | 1798 |    |    | 1616 |
|    |              |         |      | T03      | 44.07714 S  | 169.4363 E | 1805 |    |    | 1436 |
|    |              |         |      | U01      | 44.07135 S  | 169.4424 E | 1974 |    |    | 2168 |
|    |              |         |      | U02      | 44.07137 S  | 169.4444 E | 2046 |    |    | 2028 |
|    |              |         |      | U03      | 44.07161 S  | 169.4454 E | 2066 |    |    | 2009 |
|    |              |         |      | U04      | 44.07188 S  | 169.4464 E | 2111 |    |    | 2046 |
|    |              |         |      | U05      | 44.07190 S  | 169.4476 E | 2148 |    |    | 2145 |
|    |              |         |      | U06      | 44.07172 S  | 169.4487 E | 2192 |    |    | 2450 |
|    |              |         |      | Y01      | 44.08081 S  | 169.4340 E | 1744 |    |    | 1000 |
|    |              |         |      | Y02      | 44.08121 S  | 169.4323 E | 1712 |    |    | 733  |
|    |              |         |      | Y03      | 44.07947 S  | 169.4336 E | 1760 |    |    | 1329 |
|    |              |         |      | Y04      | 44.07701 S  | 169.4366 E | 1813 |    |    | 1536 |
|    |              |         |      | Y05      | 44.07435 S  | 169.4353 E | 1852 |    |    | 1820 |
|    |              |         |      | Y06      | 44.07172 S  | 169.4365 E | 1886 |    |    | 1944 |
|    |              |         |      | Y07      | 44.07176 S  | 169.4377 E | 1888 |    |    | 1857 |
|    |              |         |      | Y08      | 44.07180 S  | 169.4390 E | 1889 |    |    | 2134 |
|    |              |         |      | Y09      | 44.07183 S  | 169.4402 E | 1913 |    |    | 2021 |
|    |              |         |      | Y10      | 44.07093 S  | 169.4403 E | 1927 |    |    | 1880 |
|    |              |         |      | Y11      | 44.07090 S  | 169.4390 E | 1892 |    |    | 1883 |
|    |              |         |      | Y12      | 44.07086 S  | 169.4378 E | 1902 |    |    | 1947 |
|    |              |         |      | Y13      | 44.07077 S  | 169.4353 E | 1897 |    |    | 1745 |
|    |              |         |      | Y14      | 44.06902 S  | 169.4352 E | 1910 |    |    | 2003 |
|    |              |         |      | Y15      | 44.06725 S  | 169.4353 E | 1935 |    |    | 2068 |
|    |              |         |      | Y16      | 44.07158 S  | 169.4341 E | 1891 |    |    | 1785 |
|    |              |         |      | Y17      | 44.07152 S  | 169.4314 E | 1902 |    |    | 1834 |
|    |              |         |      | Y18      | 44.07150 S  | 169.4303 E | 1910 |    |    | 1956 |
|    |              |         |      | Y19      | 44.07061 S  | 169.4303 E | 1920 |    |    | 1960 |
|    |              |         |      | Y20      | 44.07063 S  | 169.4315 E | 1905 |    |    | 1946 |
|    |              |         |      | Y21      | 44.07070 S  | 169.4328 E | 1890 |    |    | 1820 |
|    |              |         |      | Y22      | 44.07068 S  | 169.4340 E | 1892 |    |    | 1816 |
|    |              |         |      | Y23      | 44.06823 S  | 169.4400 E | 1950 |    |    | 2782 |
|    |              |         |      | Y24      | 44.06820 S  | 169.4387 E | 1935 |    |    | 2179 |
|    |              |         |      | Y25      | 44.06817 S  | 169.4375 E | 1929 |    |    | 2135 |
|    |              |         |      | Y26      | 44.06816 S  | 169.4363 E | 1929 |    |    | 1947 |



| NR   | GLACIER NAME         | PSFG NR | YEAR | POINT-ID      | COORDINATES |            | ELEV | BW | BS | BA    |
|------|----------------------|---------|------|---------------|-------------|------------|------|----|----|-------|
|      |                      |         |      |               | LAT         | LON        | M    | MM | MM | MM    |
|      |                      |         |      | Y27           | 44.06798 S  | 169.4338 E | 1928 |    |    | 1729  |
|      |                      |         |      | Y28           | 44.07339 S  | 169.4316 E | 1878 |    |    | 2178  |
|      |                      |         |      | Y29           | 44.07342 S  | 169.4303 E | 1884 |    |    | 1754  |
|      |                      |         |      | Y30           | 44.07339 S  | 169.4330 E | 1869 |    |    | 1934  |
|      |                      |         |      | Y31           | 44.07344 S  | 169.4340 E | 1869 |    |    | 1812  |
|      |                      |         |      | Y32           | 44.07358 S  | 169.4365 E | 1876 |    |    | 1988  |
|      |                      |         |      | Y33           | 44.07361 S  | 169.4378 E | 1873 |    |    | 1887  |
|      |                      |         |      | Z00           | 44.08190 S  | 169.4316 E | 1685 |    |    | 518   |
|      |                      |         |      | Z06           | 44.07694 S  | 169.4354 E | 1808 |    |    | 1601  |
|      |                      |         |      | Z08           | 44.07523 S  | 169.4353 E | 1839 |    |    | 1887  |
|      |                      |         |      | Z10           | 44.07350 S  | 169.4354 E | 1858 |    |    | 1677  |
|      |                      |         |      | Z12           | 44.07168 S  | 169.4352 E | 1885 |    |    | 1838  |
|      |                      |         |      | Z12A          | 44.07157 S  | 169.4328 E | 1889 |    |    | 1877  |
|      |                      |         |      | Z14           | 44.06983 S  | 169.4352 E | 1876 |    |    | 1735  |
|      |                      |         |      | Z16           | 44.06819 S  | 169.4353 E | 1910 |    |    | 1822  |
|      |                      |         |      | Z18           | 44.06634 S  | 169.4350 E | 1946 |    |    | 2168  |
|      |                      |         |      | Z19           | 44.06765 S  | 169.4318 E | 1908 |    |    | 1861  |
|      |                      |         |      | Z2            | 44.08043 S  | 169.4332 E | 1730 |    |    | 868   |
|      |                      |         |      | Z20           | 44.07098 S  | 169.4413 E | 1944 |    |    | 2319  |
|      |                      |         |      | Z2A           | 44.08000 S  | 169.4321 E | 1737 |    |    | 1209  |
|      |                      |         |      | Z2B           | 44.08093 S  | 169.4346 E | 1714 |    |    | 1309  |
|      |                      |         |      | Z6A           | 44.07669 S  | 169.4329 E | 1809 |    |    | 1571  |
|      |                      |         |      | Z6D           | 44.07696 S  | 169.4379 E | 1814 |    |    | 1821  |
|      |                      |         |      | <u>NORWAY</u> |             |            |      |    |    |       |
| 19.1 | AUSTRE BROEGGERBREEN | NO15504 | 2006 | BG-102003     |             |            | 315  |    |    | -626  |
|      |                      |         |      | BG-112003     |             |            | 370  |    |    | -252  |
|      |                      |         |      | BG12-2002     |             |            | 415  |    |    | -358  |
|      |                      |         |      | BG13-2004     |             |            | 465  |    |    | -34   |
|      |                      |         |      | BG5-2004      |             |            | 155  |    |    | -1445 |
|      |                      |         |      | BG6-2004      |             |            | 190  |    |    | -1458 |
|      |                      |         |      | BG7-2004      |             |            | 215  |    |    | -1256 |
|      |                      |         |      | BG9-2004      |             |            | 285  |    |    | -992  |
|      |                      |         |      | BRG4-2005     |             |            | 140  |    |    | -1766 |
| 19.2 | AUSTRE BROEGGERBREEN | NO15504 | 2007 | BG-082006     |             |            | 260  |    |    | -695  |
|      |                      |         |      | BG-102007     |             |            | 315  |    |    | -477  |
|      |                      |         |      | BG-112007     |             |            | 370  |    |    | -234  |
|      |                      |         |      | BG12-2005     |             |            | 415  |    |    | -202  |
|      |                      |         |      | BG13-2004     |             |            | 465  |    |    | 35    |
|      |                      |         |      | BG3-2006      |             |            | 115  |    |    | -1784 |
|      |                      |         |      | BG5-2006      |             |            | 155  |    |    | -977  |
|      |                      |         |      | BG6-2007      |             |            | 190  |    |    | -909  |
|      |                      |         |      | BG7-2007      |             |            | 215  |    |    | -738  |
|      |                      |         |      | BG9-2007      |             |            | 285  |    |    | -513  |
|      |                      |         |      | BRG4-2007     |             |            | 140  |    |    | -1089 |
| 19.3 | AUSTRE BROEGGERBREEN | NO15504 | 2008 | BG-082006     |             |            | 260  |    |    | -209  |
|      |                      |         |      | BG-102007     |             |            | 315  |    |    | 69    |
|      |                      |         |      | BG-112007     |             |            | 370  |    |    | 204   |
|      |                      |         |      | BG12-2005     |             |            | 415  |    |    | 174   |
|      |                      |         |      | BG13-2004     |             |            | 465  |    |    | 331   |
|      |                      |         |      | BG3-2006      |             |            | 115  |    |    | -1618 |
|      |                      |         |      | BG5-2006      |             |            | 155  |    |    | -781  |
|      |                      |         |      | BG6-2007      |             |            | 190  |    |    | -738  |
|      |                      |         |      | BG7-2007      |             |            | 215  |    |    | -432  |
|      |                      |         |      | BG9-2007      |             |            | 285  |    |    | 8     |
|      |                      |         |      | BRG4-2007     |             |            | 140  |    |    | -1217 |
| 19.4 | AUSTRE BROEGGERBREEN | NO15504 | 2009 | BG-082006     |             |            | 251  |    |    | -380  |
|      |                      |         |      | BG-102007     |             |            | 311  |    |    | -261  |

| NR   | GLACIER NAME | PSFG NR | YEAR | POINT-ID  | COORDINATES |     | ELEV | BW | BS | BA    |
|------|--------------|---------|------|-----------|-------------|-----|------|----|----|-------|
|      |              |         |      |           | LAT         | LON | M    | MM | MM | MM    |
|      |              |         |      | BG-112007 |             |     | 365  |    |    | 20    |
|      |              |         |      | BG12-2005 |             |     | 410  |    |    | -106  |
|      |              |         |      | BG13-2004 |             |     | 461  |    |    | 208   |
|      |              |         |      | BG3-2006  |             |     | 102  |    |    | -1332 |
|      |              |         |      | BG5-2006  |             |     | 145  |    |    | -722  |
|      |              |         |      | BG6-2007  |             |     | 179  |    |    | -684  |
|      |              |         |      | BG7-2007  |             |     | 206  |    |    | -448  |
|      |              |         |      | BG9-2007  |             |     | 277  |    |    | -169  |
|      |              |         |      | BRG4-2007 |             |     | 125  |    |    | -959  |
| 20.1 | KONGSVEGEN   | NO15510 | 2006 | 1         |             |     | 156  |    |    | -2259 |
|      |              |         |      | 2         |             |     | 238  |    |    | -1926 |
|      |              |         |      | 3         |             |     | 333  |    |    | -1125 |
|      |              |         |      | 3.5       |             |     | 362  |    |    | -1046 |
|      |              |         |      | 4         |             |     | 398  |    |    | -679  |
|      |              |         |      | 4.5       |             |     | 424  |    |    | -603  |
|      |              |         |      | 5         |             |     | 464  |    |    | -122  |
|      |              |         |      | 5.5       |             |     | 503  |    |    | -160  |
|      |              |         |      | 6         |             |     | 531  |    |    | -85   |
|      |              |         |      | 6.5       |             |     | 558  |    |    | 138   |
|      |              |         |      | 7         |             |     | 591  |    |    | 429   |
|      |              |         |      | 7.5       |             |     | 635  |    |    | 594   |
|      |              |         |      | 8         |             |     | 666  |    |    | 897   |
| 20.2 | KONGSVEGEN   | NO15510 | 2007 | 8.5       |             |     | 701  |    |    | 1089  |
|      |              |         |      | 9         |             |     | 722  |    |    | 949   |
|      |              |         |      | 1         |             |     | 154  |    |    | -1854 |
|      |              |         |      | 2         |             |     | 236  |    |    | -1602 |
|      |              |         |      | 2.5       |             |     | 284  |    |    | -1017 |
|      |              |         |      | 3         |             |     | 331  |    |    | -823  |
|      |              |         |      | 3.5       |             |     | 361  |    |    | -643  |
|      |              |         |      | 4         |             |     | 397  |    |    | -475  |
|      |              |         |      | 4.5       |             |     | 423  |    |    | -526  |
|      |              |         |      | 5         |             |     | 465  |    |    | -290  |
|      |              |         |      | 5.5       |             |     | 503  |    |    | -140  |
|      |              |         |      | 6         |             |     | 531  |    |    | -157  |
|      |              |         |      | 6.5       |             |     | 558  |    |    | 73    |
| 20.3 | KONGSVEGEN   | NO15510 | 2008 | 7         |             |     | 592  |    |    | 255   |
|      |              |         |      | 7.5       |             |     | 635  |    |    | 320   |
|      |              |         |      | 8         |             |     | 667  |    |    | 537   |
|      |              |         |      | 8.5       |             |     | 702  |    |    | 600   |
|      |              |         |      | 9         |             |     | 723  |    |    | 704   |
|      |              |         |      | 1         |             |     | 152  |    |    | -1602 |
|      |              |         |      | 2         |             |     | 234  |    |    | -1080 |
|      |              |         |      | 2.5       |             |     | 285  |    |    | -618  |
|      |              |         |      | 3         |             |     | 330  |    |    | -428  |
|      |              |         |      | 3.5       |             |     | 361  |    |    | 121   |
|      |              |         |      | 4         |             |     | 396  |    |    | 58    |
|      |              |         |      | 4.5       |             |     | 423  |    |    | 219   |
|      |              |         |      | 5         |             |     | 465  |    |    | 255   |
| 20.4 | KONGSVEGEN   | NO15510 | 2009 | 5.5       |             |     | 503  |    |    | 348   |
|      |              |         |      | 6         |             |     | 531  |    |    | 380   |
|      |              |         |      | 6.5       |             |     | 558  |    |    | 651   |
|      |              |         |      | 7         |             |     | 592  |    |    | 718   |
|      |              |         |      | 7.5       |             |     | 635  |    |    | 855   |
|      |              |         |      | 8         |             |     | 667  |    |    | 897   |
|      |              |         |      | 9         |             |     | 723  |    |    | 1144  |
|      |              |         |      | 0         |             |     | 20   |    |    | -2601 |
|      |              |         |      | 2         |             |     | 233  |    |    | -1447 |

| NR   | GLACIER NAME      | PSFG NR | YEAR | POINT-ID    | COORDINATES |     | ELEV | BW | BS | BA    |
|------|-------------------|---------|------|-------------|-------------|-----|------|----|----|-------|
|      |                   |         |      |             | LAT         | LON | M    | MM | MM | MM    |
|      |                   |         |      | 2.5         |             |     | 284  |    |    | -1285 |
|      |                   |         |      | 3           |             |     | 329  |    |    | -668  |
|      |                   |         |      | 3.5         |             |     | 361  |    |    | -734  |
|      |                   |         |      | 4           |             |     | 396  |    |    | -493  |
|      |                   |         |      | 4.5         |             |     | 423  |    |    | -859  |
|      |                   |         |      | 5           |             |     | 465  |    |    | -191  |
|      |                   |         |      | 5.5         |             |     | 503  |    |    | -247  |
|      |                   |         |      | 6           |             |     | 532  |    |    | -115  |
|      |                   |         |      | 6.5         |             |     | 559  |    |    | 103   |
|      |                   |         |      | 7           |             |     | 593  |    |    | 180   |
|      |                   |         |      | 7.5         |             |     | 636  |    |    | 407   |
|      |                   |         |      | 8           |             |     | 668  |    |    | 598   |
|      |                   |         |      | 9           |             |     | 723  |    |    | 628   |
| 21.1 | MIDTRE LOVENBREEN | NO15506 | 2006 | 10          |             |     | 408  |    |    | 37    |
|      |                   |         |      | 11          |             |     | 460  |    |    | 330   |
|      |                   |         |      | 2           |             |     | 104  |    |    | -1804 |
|      |                   |         |      | 3           |             |     | 152  |    |    | -1514 |
|      |                   |         |      | 4           |             |     | 198  |    |    | -1152 |
|      |                   |         |      | 5           |             |     | 237  |    |    | -1120 |
|      |                   |         |      | 6           |             |     | 267  |    |    | -644  |
|      |                   |         |      | 6.5         |             |     | 282  |    |    | -551  |
|      |                   |         |      | 7           |             |     | 306  |    |    | -661  |
|      |                   |         |      | 8           |             |     | 339  |    |    | -347  |
|      |                   |         |      | 9           |             |     | 368  |    |    | -313  |
|      |                   |         |      | 9.5         |             |     | 387  |    |    | 13    |
|      |                   |         |      | 9.5N        |             |     | 416  |    |    | -72   |
| 21.2 | MIDTRE LOVENBREEN | NO15506 | 2007 | MLB2-2006   |             |     | 103  |    |    | -1697 |
|      |                   |         |      | MLB3-2006   |             |     | 150  |    |    | -1136 |
|      |                   |         |      | MLB4-2006   |             |     | 196  |    |    | -797  |
|      |                   |         |      | MLB5-2007   |             |     | 235  |    |    | -819  |
|      |                   |         |      | MLB6.5C-06  |             |     | 280  |    |    | -432  |
|      |                   |         |      | MLB6-05     |             |     | 265  |    |    | -479  |
|      |                   |         |      | MLB7.5C-07  |             |     | 321  |    |    | -259  |
|      |                   |         |      | MLB7-2003   |             |     | 304  |    |    | -362  |
|      |                   |         |      | MLB82004    |             |     | 337  |    |    | -182  |
|      |                   |         |      | MLB9.5-2003 |             |     | 385  |    |    | 21    |
|      |                   |         |      | MLB9.5N-04  |             |     | 416  |    |    | 76    |
|      |                   |         |      | MLB92004    |             |     | 366  |    |    | -41   |
|      |                   |         |      | NP10-1995   |             |     | 406  |    |    | 246   |
|      |                   |         |      | NP11-AWS    |             |     | 459  |    |    | 450   |
| 21.3 | MIDTRE LOVENBREEN | NO15506 | 2008 | MLB-2-2008  |             |     | 101  |    |    | -1350 |
|      |                   |         |      | MLB3-2006   |             |     | 149  |    |    | -754  |
|      |                   |         |      | MLB4-2006   |             |     | 195  |    |    | -497  |
|      |                   |         |      | MLB5-2007   |             |     | 234  |    |    | -405  |
|      |                   |         |      | MLB6.5C-06  |             |     | 279  |    |    | -151  |
|      |                   |         |      | MLB6-2005   |             |     | 265  |    |    | 28    |
|      |                   |         |      | MLB7.5C-07  |             |     | 320  |    |    | 32    |
|      |                   |         |      | MLB7-2003   |             |     | 303  |    |    | 1     |
|      |                   |         |      | MLB82004    |             |     | 337  |    |    | 41    |
|      |                   |         |      | MLB9.5-03   |             |     | 384  |    |    | 80    |
|      |                   |         |      | MLB9.5N-04  |             |     | 416  |    |    | 99    |
|      |                   |         |      | MLB92004    |             |     | 365  |    |    | 114   |
|      |                   |         |      | NP10-1995   |             |     | 405  |    |    | 330   |
|      |                   |         |      | NP11-AWS    |             |     | 459  |    |    | 611   |
| 21.4 | MIDTRE LOVENBREEN | NO15506 | 2009 | MLB-11-09   |             |     | 459  |    |    | 198   |
|      |                   |         |      | MLB-2-2008  |             |     | 101  |    |    | -1318 |
|      |                   |         |      | MLB3-2006   |             |     | 149  |    |    | -766  |
|      |                   |         |      | MLB4-2006   |             |     | 195  |    |    | -497  |
|      |                   |         |      | MLB5-2007   |             |     | 234  |    |    | -370  |

| NR                  | GLACIER NAME | PSFG NR | YEAR | POINT-ID    | COORDINATES |           | ELEV | BW | BS | BA    |
|---------------------|--------------|---------|------|-------------|-------------|-----------|------|----|----|-------|
|                     |              |         |      |             | LAT         | LON       | M    | MM | MM | MM    |
|                     |              |         |      | MLB6.5C-06  |             |           | 279  |    |    | -173  |
|                     |              |         |      | MLB6-2005   |             |           | 265  |    |    | -9    |
|                     |              |         |      | MLB7.5C-04  |             |           | 320  |    |    | -198  |
|                     |              |         |      | MLB7-2003   |             |           | 303  |    |    | -115  |
|                     |              |         |      | MLB82004    |             |           | 337  |    |    | -155  |
|                     |              |         |      | MLB9.5-2003 |             |           | 384  |    |    | 117   |
|                     |              |         |      | MLB9.5N-04  |             |           | 416  |    |    | 77    |
|                     |              |         |      | MLB92004    |             |           | 365  |    |    | -54   |
|                     |              |         |      | NP10-1995   |             |           | 405  |    |    | 201   |
| 22.1                | NIGARDSBREEN | NO31014 | 2006 | 1000        | 61.69400 N  | 7.16100 E | 986  |    |    | -6300 |
|                     |              |         |      | 54          | 61.70800 N  | 7.11000 E | 1612 |    |    | -1070 |
|                     |              |         |      | 55          | 61.71700 N  | 7.15400 E | 1465 |    |    | -1660 |
|                     |              |         |      | 56          | 61.69100 N  | 7.07800 E | 1797 |    |    | -600  |
|                     |              |         |      | 57          | 61.67800 N  | 7.03800 E | 1962 |    |    | -420  |
|                     |              |         |      | 600         | 61.68400 N  | 7.19900 E | 575  |    |    | -9450 |
|                     |              |         |      | 94          | 61.71500 N  | 7.07000 E | 1703 |    |    | -680  |
|                     |              |         |      | 95          | 61.72800 N  | 7.09900 E | 1681 |    |    | -140  |
| 22.2                | NIGARDSBREEN | NO31014 | 2007 | 1000        | 61.69300 N  | 7.16400 E | 970  |    |    | -3650 |
|                     |              |         |      | 54          | 61.70800 N  | 7.10900 E | 1610 |    |    | 1170  |
|                     |              |         |      | 55          | 61.71700 N  | 7.15400 E | 1465 |    |    | 900   |
|                     |              |         |      | 56          | 61.69100 N  | 7.07800 E | 1800 |    |    | 1800  |
|                     |              |         |      | 57          | 61.67800 N  | 7.03800 E | 1960 |    |    | 2520  |
|                     |              |         |      | 600         | 61.68300 N  | 7.19900 E | 580  |    |    | -7110 |
|                     |              |         |      | 94          | 61.71500 N  | 7.07000 E | 1700 |    |    | 1560  |
|                     |              |         |      | 95          | 61.72800 N  | 7.09900 E | 1680 |    |    | 2010  |
|                     |              |         |      | 96          | 61.74000 N  | 7.12600 E | 1750 |    |    | 1890  |
| <u>SWITZERLAND.</u> |              |         |      |             |             |           |      |    |    |       |
| 23.1                | FINDELEN     | CH0016  | 2006 | Ag1         | 63.23200 N  | 9.55400 E | 3040 |    |    | -2600 |
|                     |              |         |      | Ag2         | 63.25320 N  | 9.54760 E | 3090 |    |    | -2600 |
|                     |              |         |      | Ag3         | 63.27120 N  | 9.55430 E | 3130 |    |    | -2600 |
|                     |              |         |      | Fi1         | 62.97000 N  | 9.55800 E | 2590 |    |    | -8000 |
|                     |              |         |      | Fi10        | 63.44500 N  | 9.43900 E | 3270 |    |    | -600  |
|                     |              |         |      | Fi2         | 62.97900 N  | 9.54200 E | 2580 |    |    | -7400 |
|                     |              |         |      | Fi3         | 63.03200 N  | 9.54500 E | 2660 |    |    | -6200 |
|                     |              |         |      | Fi4         | 63.09200 N  | 9.54900 E | 2720 |    |    | -5600 |
|                     |              |         |      | Fi5         | 63.09900 N  | 9.52300 E | 2730 |    |    | -6000 |
|                     |              |         |      | Fi6         | 63.15300 N  | 9.53700 E | 2810 |    |    | -4600 |
|                     |              |         |      | Fi7         | 63.21800 N  | 9.49800 E | 2950 |    |    | -3600 |
|                     |              |         |      | Fi8         | 63.25300 N  | 9.43700 E | 3050 |    |    | -3000 |
|                     |              |         |      | Fi9         | 63.33200 N  | 9.38400 E | 3140 |    |    | -2100 |
|                     |              |         |      | Fi-s2       | 63.50700 N  | 9.39200 E | 3350 |    |    | 1000  |
|                     |              |         |      | Fi-s3       | 63.34120 N  | 9.23000 E | 3460 |    |    | 1600  |
| 23.2                | FINDELEN     | CH0016  | 2007 | Ag1         | 63.23200 N  | 9.55400 E | 3040 |    |    | -2100 |
|                     |              |         |      | Ag2         | 63.25320 N  | 9.54760 E | 3090 |    |    | -1900 |
|                     |              |         |      | Ag3         | 63.27120 N  | 9.55430 E | 3130 |    |    | -1800 |
|                     |              |         |      | Fi1         | 62.97000 N  | 9.55800 E | 2590 |    |    | -7500 |
|                     |              |         |      | Fi10        | 63.44500 N  | 9.43900 E | 3270 |    |    | 200   |
|                     |              |         |      | Fi11        | 63.24150 N  | 9.49710 E | 3000 |    |    | -3000 |
|                     |              |         |      | Fi2         | 62.97900 N  | 9.54200 E | 2580 |    |    | -7200 |
|                     |              |         |      | Fi3         | 63.03200 N  | 9.54500 E | 2660 |    |    | -5500 |
|                     |              |         |      | Fi4         | 63.09200 N  | 9.54900 E | 2720 |    |    | -4900 |
|                     |              |         |      | Fi5         | 63.09900 N  | 9.52300 E | 2730 |    |    | -5700 |
|                     |              |         |      | Fi6         | 63.15300 N  | 9.53700 E | 2810 |    |    | -3800 |
|                     |              |         |      | Fi7         | 63.21800 N  | 9.49800 E | 2950 |    |    | -2400 |
|                     |              |         |      | Fi8         | 63.25300 N  | 9.43700 E | 3050 |    |    | -1600 |
|                     |              |         |      | Fi9         | 63.33200 N  | 9.38400 E | 3140 |    |    | -500  |

| NR   | GLACIER NAME | PSFG NR | YEAR | POINT-ID | COORDINATES |           | ELEV | BW   | BS    | BA    |
|------|--------------|---------|------|----------|-------------|-----------|------|------|-------|-------|
|      |              |         |      |          | LAT         | LON       | M    | MM   | MM    | MM    |
| 23.3 | FINDELEN     | CH0016  | 2008 | Fi-s1    | 63.44150 N  | 9.39220 E | 3290 |      |       | 200   |
|      |              |         |      | Fi-s2    | 63.50700 N  | 9.39200 E | 3350 |      |       | 1000  |
|      |              |         |      | Ag1      | 63.23200 N  | 9.55400 E | 3040 |      |       | -2500 |
|      |              |         |      | Ag2      | 63.25320 N  | 9.54760 E | 3090 |      |       | -2100 |
|      |              |         |      | Ag3      | 63.27120 N  | 9.55430 E | 3130 |      |       | -2300 |
|      |              |         |      | Fi1      | 62.97000 N  | 9.55800 E | 2590 |      |       | -6700 |
|      |              |         |      | Fi10     | 63.44500 N  | 9.43900 E | 3270 |      |       | -300  |
|      |              |         |      | Fi11     | 63.24150 N  | 9.49710 E | 3000 |      |       | -2900 |
|      |              |         |      | Fi2      | 62.97900 N  | 9.54200 E | 2580 |      |       | -6800 |
|      |              |         |      | Fi3      | 63.03200 N  | 9.54500 E | 2660 |      |       | -6000 |
|      |              |         |      | Fi4      | 63.09200 N  | 9.54900 E | 2720 |      |       | -5400 |
|      |              |         |      | Fi5      | 63.09900 N  | 9.52300 E | 2730 |      |       | -5900 |
|      |              |         |      | Fi6      | 63.15300 N  | 9.53700 E | 2810 |      |       | -4100 |
|      |              |         |      | Fi7      | 63.21800 N  | 9.49800 E | 2950 |      |       | -2800 |
|      |              |         |      | Fi8      | 63.25300 N  | 9.43700 E | 3050 |      |       | -2200 |
|      |              |         |      | Fi9      | 63.33200 N  | 9.38400 E | 3140 |      |       | -1400 |
|      |              |         |      | Fi-s2    | 63.50700 N  | 9.39200 E | 3350 |      |       | 1000  |
| 24.1 | PIZOL        | CH0081  | 2007 | 1-06'    | 46.96061 N  | 9.39038 E | 2629 |      |       | -2900 |
|      |              |         |      | 2-06'    | 46.95914 N  | 9.38951 E | 2700 |      |       | -1290 |
| 24.2 | PIZOL        | CH0081  | 2008 | 1-06'    | 46.96061 N  | 9.39038 E | 2629 |      |       | -2090 |
|      |              |         |      | 2-06'    | 46.95914 N  | 9.38951 E | 2700 |      |       | -100  |
|      |              |         |      | 2-07'    | 46.95948 N  | 9.38904 E | 2698 |      |       | -140  |
|      |              |         |      | 3-07'    | 46.95832 N  | 9.38766 E | 2765 |      |       | -660  |
| 24.3 | PIZOL        | CH0081  | 2009 | 1-08'    | 46.96061 N  | 9.39038 E | 2629 |      |       | -1940 |
|      |              |         |      | 2-06'    | 46.95914 N  | 9.38951 E | 2700 |      |       | -700  |
|      |              |         |      | 2-07'    | 46.95948 N  | 9.38904 E | 2698 |      |       | -10   |
|      |              |         |      | 3-08'    | 46.95832 N  | 9.38766 E | 2765 |      |       | -530  |
|      |              |         |      | 4-08'    | 46.96065 N  | 9.38909 E | 2663 |      |       | -2200 |
|      |              |         |      | 5-08'    | 46.96048 N  | 9.38854 E | 2682 |      |       | -1130 |
| 24.4 | PIZOL        | CH0081  | 2010 | 1-08     | 46.96061 N  | 9.39038 E | 2629 |      |       | -1490 |
|      |              |         |      | 1-09     | 46.96061 N  | 9.39038 E | 2629 |      |       | -1530 |
|      |              |         |      | 2-07     | 46.95948 N  | 9.38904 E | 2698 |      |       | -350  |
|      |              |         |      | 2-09     | 46.95926 N  | 9.38948 E | 2700 |      |       | -870  |
|      |              |         |      | 3-08     | 46.95832 N  | 9.38766 E | 2770 |      |       | -560  |
|      |              |         |      | 3-09     | 46.95830 N  | 9.38780 E | 2777 |      |       | -430  |
|      |              |         |      | 4-09     | 46.96065 N  | 9.38909 E | 2663 |      |       | -2370 |
|      |              |         |      | 5-09     | 46.96048 N  | 9.38854 E | 2675 |      |       | -1450 |
|      |              |         |      | 6-09     | 46.95859 N  | 9.39040 E | 2711 |      |       | -420  |
| 25.1 | TSANFLEURON  | CH0033  | 2010 | 1-09     | 46.32420 N  | 7.21590 E | 2818 |      |       | -350  |
|      |              |         |      | 2-09     | 46.31699 N  | 7.21685 E | 2857 |      |       | -420  |
|      |              |         |      | 4-09     | 46.32419 N  | 7.23061 E | 2726 |      |       | -960  |
|      |              |         |      | 5-09     | 46.32167 N  | 7.23448 E | 2684 |      |       | -1500 |
| 26.1 | EMMONS       | US2022  | 2009 | 1        |             |           | 3118 |      |       | 40    |
|      |              |         |      | 2        |             |           | 2810 |      |       | -1400 |
|      |              |         |      | 2X       |             |           | 2800 |      |       | -1540 |
|      |              |         |      | 3        |             |           | 1970 |      |       | -6020 |
|      |              |         |      | 4        |             |           | 1700 |      |       | -8170 |
|      |              |         |      | 4A       |             |           | 1705 |      |       | -1590 |
|      |              |         |      | 5        |             |           | 1580 |      |       | -1670 |
| 26.2 | EMMONS       | US2022  | 2010 | 1        |             |           | 3118 | 3510 | -2250 | 1260  |
|      |              |         |      | 2        |             |           | 2810 | 2760 | -640  | 2120  |
|      |              |         |      | 2X       |             |           | 2800 | 2760 | -530  | 2230  |

| NR   | GLACIER NAME    | PSFG NR | YEAR | POINT-ID | COORDINATES |             | ELEV | BW   | BS    | BA    |
|------|-----------------|---------|------|----------|-------------|-------------|------|------|-------|-------|
|      |                 |         |      |          | LAT         | LON         | M    | MM   | MM    | MM    |
|      |                 |         |      | 3        |             |             | 1970 | 2060 | -4110 | -2040 |
|      |                 |         |      | 4        |             |             | 1700 | 1920 | -9900 | -7980 |
|      |                 |         |      | 4A       |             |             | 1705 | 950  | -3390 | -2440 |
|      |                 |         |      | 5        |             |             | 1580 | 1170 | -4670 | -3500 |
| 27.1 | GULKANA         | US0200  | 2008 | 100      | 63.25930 N  | 145.42975 W | 1332 |      |       | -3417 |
|      |                 |         |      | 200      | 63.28550 N  | 145.41034 W | 1671 |      |       | -148  |
|      |                 |         |      | 300      | 63.28489 N  | 145.38504 W | 1833 |      |       | 673   |
| 27.2 | GULKANA         | US0200  | 2009 | 100      | 63.25930 N  | 145.42975 W | 1332 |      |       | -4780 |
|      |                 |         |      | 200      | 63.28550 N  | 145.41034 W | 1672 |      |       | -1200 |
|      |                 |         |      | 300      | 63.28489 N  | 145.38504 W | 1833 |      |       | 222   |
| 28.1 | NISQUALLY       | US2027  | 2009 | 1        |             |             | 3382 |      |       | -340  |
|      |                 |         |      | 2        |             |             | 2960 |      |       | -1530 |
|      |                 |         |      | 3        |             |             | 2175 |      |       | -3640 |
|      |                 |         |      | 4        |             |             | 1890 |      |       | -4580 |
|      |                 |         |      | 4A       |             |             | 1870 |      |       | -1060 |
|      |                 |         |      | 5        |             |             | 1778 |      |       | -3260 |
| 28.2 | NISQUALLY       | US2027  | 2010 | 1        |             |             | 3382 | 340  | -1570 | 1830  |
|      |                 |         |      | 2        |             |             | 2960 | 3310 | -1750 | 1560  |
|      |                 |         |      | 3        |             |             | 2175 | 3130 | -3200 | -80   |
|      |                 |         |      | 4        |             |             | 1890 | 2340 | -5500 | -3160 |
|      |                 |         |      | 4A       |             |             | 1870 | 240  | -4150 | -1750 |
|      |                 |         |      | 5        |             |             | 1778 | 2120 | -6410 | -4290 |
| 29.1 | NOISY CREEK     | US2078  | 2009 | 1        |             |             | 1848 |      |       | -2100 |
|      |                 |         |      | 2        |             |             | 1840 |      |       | -1020 |
|      |                 |         |      | 3        |             |             | 1800 |      |       | 420   |
|      |                 |         |      | 4        |             |             | 1755 |      |       | -2340 |
|      |                 |         |      | 5        |             |             | 1724 |      |       | -2180 |
| 29.2 | NOISY CREEK     | US2078  | 2010 | 1        |             |             | 1860 | 4100 | -3338 | 720   |
|      |                 |         |      | 2        |             |             | 1840 | 3600 | -3280 | 320   |
|      |                 |         |      | 3        |             |             | 1800 | 2540 | -3270 | -730  |
|      |                 |         |      | 4        |             |             | 1755 | 2760 | -3280 | -520  |
|      |                 |         |      | 5        |             |             | 1724 | 3050 | -3330 | -290  |
| 30.1 | NORTH KLAUWATTI | US2076  | 2009 | 1        |             |             | 2337 |      |       | -1630 |
|      |                 |         |      | 2        |             |             | 2226 |      |       | -370  |
|      |                 |         |      | 3        |             |             | 2104 |      |       | -650  |
|      |                 |         |      | 4        |             |             | 1950 |      |       | -3850 |
|      |                 |         |      | 5        |             |             | 1858 |      |       | -5280 |
| 30.2 | NORTH KLAUWATTI | US2076  | 2010 | 1        |             |             | 2338 | 2710 | -2400 | 670   |
|      |                 |         |      | 2        |             |             | 2226 | 2610 | -2300 | 310   |
|      |                 |         |      | 3        |             |             | 2104 | 2620 | -2410 | 210   |
|      |                 |         |      | 4        |             |             | 1950 | 2550 | -2680 | -130  |
|      |                 |         |      | 5        |             |             | 1858 | 2510 | -2830 | -310  |
| 31.1 | SANDALEE        | US2079  | 2009 | 1        |             |             | 2254 |      |       | -290  |
|      |                 |         |      | 2        |             |             | 2177 |      |       | -630  |
|      |                 |         |      | 3        |             |             | 2094 |      |       | -2610 |
|      |                 |         |      | 4        |             |             | 2001 |      |       | -20   |
| 31.2 | SANDALEE        | US2079  | 2010 | 1        |             |             | 2244 | 2100 | -2040 | 60    |
|      |                 |         |      | 2        |             |             | 2196 | 2650 | -2050 | 600   |
|      |                 |         |      | 3        |             |             | 2094 | 2520 | -2710 | -180  |
|      |                 |         |      | 4        |             |             | 1988 | 2710 | -3240 | -530  |

| NR   | GLACIER NAME  | PSFG NR | YEAR | POINT-ID | COORDINATES |             | ELEV | BW   | BS    | BA    |
|------|---------------|---------|------|----------|-------------|-------------|------|------|-------|-------|
|      |               |         |      |          | LAT         | LON         | M    | MM   | MM    | MM    |
| 32.1 | SILVER        | US2077  | 2009 | 1        |             |             | 2538 |      |       | 330   |
|      |               |         |      | 2        |             |             | 2433 |      |       | -3460 |
|      |               |         |      | 3        |             |             | 2291 |      |       | 50    |
|      |               |         |      | 4        |             |             | 2162 |      |       | -4210 |
| 32.2 | SILVER        | US2077  | 2010 | 1        |             |             | 2567 | 2280 | -1340 | 940   |
|      |               |         |      | 2        |             |             | 2420 | 2260 | -1270 | 980   |
|      |               |         |      | 3        |             |             | 2319 | 2320 | -1450 | 860   |
|      |               |         |      | 4        |             |             | 2198 | 1830 | -2110 | -280  |
| 33.1 | SOUTH CASCADE | US2013  | 2008 | 1        | 48.36460 N  | 121.05990 W | 1663 |      |       | -6450 |
|      |               |         |      | 2        | 48.36320 N  | 121.06090 W | 1732 |      |       | -3230 |
|      |               |         |      | 3        | 48.35860 N  | 121.05850 W | 1837 |      |       | -430  |
|      |               |         |      | 4        | 48.35180 N  | 121.05430 W | 1946 |      |       | -120  |
|      |               |         |      | 5        | 48.34770 N  | 121.05090 W | 2027 |      |       | 1020  |
|      |               |         |      | 6        | 48.34870 N  | 121.04490 W | 2066 |      |       | -160  |
| 33.2 | SOUTH CASCADE | US2013  | 2009 | 1        | 48.36460 N  | 121.05990 W | 1670 |      |       | -6250 |
|      |               |         |      | 2        | 48.36320 N  | 121.06090 W | 1725 |      |       | -4290 |
|      |               |         |      | 3        | 48.35860 N  | 121.05850 W | 1834 |      |       | -2460 |
|      |               |         |      | 4        | 48.35180 N  | 121.05430 W | 1944 |      |       | -1430 |
|      |               |         |      | 5        | 48.34770 N  | 121.05090 W | 2026 |      |       | -180  |
|      |               |         |      | 6        | 48.34870 N  | 121.04490 W | 2064 |      |       | -1520 |
| 34.1 | WOLVERINE     | US0411  | 2008 | 100      |             |             | 535  |      |       | -4120 |
|      |               |         |      | 200      |             |             | 1055 |      |       | -2206 |
|      |               |         |      | 300      |             |             | 1287 |      |       | 2752  |
| 34.2 | WOLVERINE     | US0411  | 2009 | 100      |             |             | 529  |      |       | -7385 |
|      |               |         |      | 200      |             |             | 1053 |      |       | -4094 |
|      |               |         |      | 300      |             |             | 1284 |      |       | -194  |





WORLD GLACIER MONITORING SERVICE

CHANGES IN AREA, VOLUME  
AND THICKNESS

TABLE D

|                  |  |
|------------------|--|
| NR               | Record number  |
| GLACIER NAME     | 15 alphabetic or numeric digits  |
| PSFG NUMBER      | 5 digits identifying glacier with alphabetic prefix denoting country               |
| PERIOD           | Period from ‘reference year’ to ‘survey year’ in which the changes take place      |
| ALTITUDE         | Altitude interval in meters above sea level  |
| AREA SY          | Area of altitude interval for ‘survey year’ (square kilometers)                    |
| AREA CHANGE      | Change in area of altitude interval for period of change (thousand square meters)  |
| VOLUME CHANGE    | Change in volume of altitude interval for period of change (thousand cubic meters) |
| THICKNESS CHANGE | Change in thickness of altitude interval for period of change (millimeters)        |

| NR      | GLACIER NAME      | PSFG NR | PERIOD |          | ALTITUDE |               | AREA   | AREA   | VOLUME     | THICKNESS |
|---------|-------------------|---------|--------|----------|----------|---------------|--------|--------|------------|-----------|
|         |                   |         | FROM   | TO       | FROM     | TO            | SY     | CHANGE | CHANGE     | CHANGE    |
| AUSTRIA |                   |         |        |          |          |               |        |        |            |           |
| 1.1     | HINTEREIS FERNER  | AT0209  | 1997   | 2006     | 2400     | 3727          |        |        |            | -11882    |
| 2.1     | JAMTAL F.         | AT0106  | 2002   | 2006     | 2370     | 3120          |        |        |            | -5882     |
| 3.1     | KESSELWAND FERNER | AT0226  | 1997   | 2006     | 2698     | 3490          |        |        |            | -5882     |
| 4.1     | VERNAGT FERNER    | AT0211  | 1997   | 2006     | 2793     | 3631          |        |        |            | -12824    |
| BOLIVIA |                   |         |        |          |          |               |        |        |            |           |
| 5.1     | CHACALTAYA        | BO5180  | 2005   | 2006     | 5325     | 5350          | 0.0018 | 0      | -1.373605  | -557      |
|         |                   |         |        |          | 5300     | 5325          | 0.0025 | 0      | -1.740208  | -624      |
|         |                   |         |        |          | 5275     | 5300          | 0.0003 | 0      | -0.340404  | -737      |
|         |                   |         |        |          | 5250     | 5275          | 0.0005 | -1     | -1.503737  | -2215     |
|         |                   |         |        |          | 5225     | 5250          | 0.0018 | -1     | -5.55953   | -1805     |
|         |                   |         |        |          | 5200     | 5225          | 0.0003 | 0      | -1.429273  | -1254     |
|         |                   |         |        |          | 5200     | 5350          | 0.0072 | -3     | -11.946757 | -1199     |
| 5.2     | CHACALTAYA        | BO5180  | 2006   | 2007     | 5325     | 5350          | 0.0006 | -1     | -0.00496   | -1185     |
|         |                   |         |        |          | 5300     | 5325          | 0.0012 | -1     | -2.9283    | -1224     |
|         |                   |         |        |          | 5275     | 5300          | 0.0001 | 0      | -0.46467   | -3198     |
|         |                   |         |        |          | 5250     | 5275          | 0.0011 | 1      | -1.59375   | -2338     |
|         |                   |         |        |          | 5225     | 5250          | 0.0000 | -2     | -0.84163   | -312      |
|         |                   |         |        |          | 5225     | 5350          | 0.0031 | -4     | -5.83331   | -1652     |
|         |                   |         |        |          | 5.3      | CHACALTAYA    | BO5180 | 2007   | 2008       | 5325      |
| 5300    | 5325              | 0.0004  | -1     | -0.37961 |          |               |        |        |            | -808      |
| 5275    | 5350              | 0.0040  | -2     | -1.59925 |          |               |        |        |            | -1549     |
| 6.1     | CHARQUINI SUR     | BO      | 2005   | 2006     | 5200     | 5250          | 0.0638 | -1     |            | 324       |
|         |                   |         |        |          | 5150     | 5200          | 0.0763 | -1     |            | 77        |
|         |                   |         |        |          | 5100     | 5150          | 0.1146 | -1     |            | -26       |
|         |                   |         |        |          | 5050     | 5100          | 0.0652 | -2     |            | -689      |
|         |                   |         |        |          | 5000     | 5050          | 0.0342 | -12    |            | -2840     |
|         |                   |         |        |          | 5000     | 5250          | 0.3541 | -17    |            | -631      |
|         |                   |         |        |          | 6.2      | CHARQUINI SUR | BO     | 2006   | 2007       | 5200      |
| 5150    | 5200              | 0.0763  | 0      |          |          |               |        |        |            | -226      |
| 5100    | 5150              | 0.1156  | 1      |          |          |               |        |        |            | -338      |
| 5050    | 5100              | 0.0606  | -5     |          |          |               |        |        |            | -1344     |
| 5000    | 5050              | 0.0196  | -15    |          |          |               |        |        |            | -1774     |
| 5000    | 5250              | 0.3359  | -18    |          |          |               |        |        |            | -482      |
| 6.3     | CHARQUINI SUR     | BO      | 2007   | 2008     |          |               |        |        |            | 5150      |
|         |                   |         |        |          | 5100     | 5150          | 0.1156 | 0      |            | 303       |
|         |                   |         |        |          | 5050     | 5100          | 0.0606 | 0      |            | -156      |
|         |                   |         |        |          | 5000     | 5050          | 0.0196 | 0      |            | -683      |
|         |                   |         |        |          | 5000     | 5200          | 0.3359 | 0      |            | 161       |
| 6.4     | CHARQUINI SUR     | BO      | 2008   | 2009     | 5200     | 5250          | 0.0638 |        |            | 68        |
|         |                   |         |        |          | 5150     | 5200          | 0.0763 |        |            | -341      |
|         |                   |         |        |          | 5100     | 5150          | 0.1156 |        |            | -697      |
|         |                   |         |        |          | 5050     | 5100          | 0.0606 |        |            | -385      |
|         |                   |         |        |          | 4950     | 5050          | 0.0196 |        |            | -262      |
|         |                   |         |        |          | 4950     | 5250          | 0.3359 |        |            | -1617     |
| 6.5     | CHARQUINI SUR     | BO      | 2009   | 2010     | 5200     | 5250          | 0.0638 |        |            | 97        |
|         |                   |         |        |          | 5150     | 5200          | 0.0763 |        |            | -797      |
|         |                   |         |        |          | 5100     | 5150          | 0.1156 |        |            | -1122     |
|         |                   |         |        |          | 5050     | 5100          | 0.0606 |        |            | -737      |

| NR  | GLACIER NAME | PSFG NR | PERIOD |      | ALTITUDE |      | AREA   |        | VOLUME | THICKNESS |
|-----|--------------|---------|--------|------|----------|------|--------|--------|--------|-----------|
|     |              |         | FROM   | TO   | FROM     | TO   | SY     | CHANGE |        |           |
|     |              |         |        |      | 4950     | 5050 | 0.0196 |        |        | -361      |
|     |              |         |        |      | 4950     | 5250 | 0.3359 |        |        | -2921     |
| 7.1 | ZONGO        | BO5150  | 1997   | 2006 | 4900     | 6000 |        |        |        | -18133    |
| 7.2 | ZONGO        | BO5150  | 2005   | 2006 | 5900     | 6000 | 0.0357 | 0      |        | 639       |
|     |              |         |        |      | 5800     | 5900 | 0.0785 | 0      |        | 639       |
|     |              |         |        |      | 5700     | 5800 | 0.1386 | 0      |        | 565       |
|     |              |         |        |      | 5600     | 5700 | 0.2345 | 0      |        | 491       |
|     |              |         |        |      | 5500     | 5600 | 0.2621 | 0      |        | 417       |
|     |              |         |        |      | 5400     | 5500 | 0.2336 | 0      |        | 403       |
|     |              |         |        |      | 5300     | 5400 | 0.1787 | 0      |        | 390       |
|     |              |         |        |      | 5200     | 5300 | 0.1594 | 0      |        | 376       |
|     |              |         |        |      | 5100     | 5200 | 0.2211 | -2     |        | -542      |
|     |              |         |        |      | 5000     | 5100 | 0.2761 | 0      |        | -1832     |
|     |              |         |        |      | 4900     | 5000 | 0.0628 | -4     |        | -5327     |
|     |              |         |        |      | 4900     | 6000 | 1.8809 | -6     |        | -344      |
| 7.3 | ZONGO        | BO5150  | 2006   | 2007 | 5900     | 6000 | 0.0357 | 0      |        | 1202      |
|     |              |         |        |      | 5800     | 5900 | 0.0785 | 0      |        | 1202      |
|     |              |         |        |      | 5700     | 5800 | 0.1386 | 0      |        | 1202      |
|     |              |         |        |      | 5600     | 5700 | 0.2345 | 0      |        | 954       |
|     |              |         |        |      | 5500     | 5600 | 0.2621 | 0      |        | 793       |
|     |              |         |        |      | 5400     | 5500 | 0.2336 | 0      |        | 571       |
|     |              |         |        |      | 5300     | 5400 | 0.1787 | 0      |        | 349       |
|     |              |         |        |      | 5200     | 5300 | 0.1594 | 0      |        | -95       |
|     |              |         |        |      | 5100     | 5200 | 0.2226 | 2      |        | -519      |
|     |              |         |        |      | 5000     | 5100 | 0.2694 | -7     |        | -2683     |
|     |              |         |        |      | 4900     | 5000 | 0.0577 | -5     |        | -6539     |
|     |              |         |        |      | 4900     | 6000 | 1.8707 | -10    |        | -324      |
| 7.4 | ZONGO        | BO5150  | 2007   | 2008 | 5900     | 6000 | 0.0357 | 0      |        | 934       |
|     |              |         |        |      | 5800     | 5900 | 0.0785 | 0      |        | 934       |
|     |              |         |        |      | 5700     | 5800 | 0.1386 | 0      |        | 934       |
|     |              |         |        |      | 5600     | 5700 | 0.2345 | 0      |        | 870       |
|     |              |         |        |      | 5500     | 5600 | 0.2621 | 0      |        | 856       |
|     |              |         |        |      | 5400     | 5500 | 0.2336 | 0      |        | 751       |
|     |              |         |        |      | 5300     | 5400 | 0.1787 | 0      |        | 647       |
|     |              |         |        |      | 5200     | 5300 | 0.1594 | 0      |        | 437       |
|     |              |         |        |      | 5100     | 5200 | 0.2226 | 0      |        | 19        |
|     |              |         |        |      | 5000     | 5100 | 0.2694 | 0      |        | -1200     |
|     |              |         |        |      | 4900     | 5000 | 0.0519 | -10    |        | -4354     |
|     |              |         |        |      | 4900     | 6000 | 1.8650 | -10    |        | 257       |
| 7.5 | ZONGO        | BO5150  | 2008   | 2009 | 5900     | 6000 | 0.0624 |        |        | 15        |
|     |              |         |        |      | 5800     | 5900 | 0.1045 |        |        | 28        |
|     |              |         |        |      | 5700     | 5800 | 0.1875 |        |        | 51        |
|     |              |         |        |      | 5600     | 5700 | 0.2611 |        |        | 69        |
|     |              |         |        |      | 5500     | 5600 | 0.2961 |        |        | 77        |
|     |              |         |        |      | 5400     | 5500 | 0.2193 |        |        | 29        |
|     |              |         |        |      | 5300     | 5400 | 0.1561 |        |        | -4        |
|     |              |         |        |      | 5200     | 5300 | 0.1379 |        |        | -48       |
|     |              |         |        |      | 5100     | 5200 | 0.2640 |        |        | -229      |
|     |              |         |        |      | 5000     | 5100 | 0.1976 |        |        | -361      |
|     |              |         |        |      | 4900     | 5000 | 0.0397 |        |        | -172      |
|     |              |         |        |      | 4900     | 6000 | 1.9261 |        |        | -543      |
| 7.6 | ZONGO        | BO5150  | 2009   | 2010 | 5900     | 6000 | 0.0624 |        |        | 27        |
|     |              |         |        |      | 5800     | 5900 | 0.1045 |        |        | 46        |
|     |              |         |        |      | 5700     | 5800 | 0.1875 |        |        | 82        |
|     |              |         |        |      | 5600     | 5700 | 0.2611 |        |        | 115       |

| NR              | GLACIER NAME    | PSFG NR | PERIOD |      | ALTITUDE |      | AREA   |        | VOLUME   | THICKNESS |
|-----------------|-----------------|---------|--------|------|----------|------|--------|--------|----------|-----------|
|                 |                 |         | FROM   | TO   | FROM     | TO   | SY     | CHANGE |          |           |
|                 |                 |         |        |      | 5500     | 5600 | 0.2961 |        |          | 128       |
|                 |                 |         |        |      | 5400     | 5500 | 0.2193 |        |          | 38        |
|                 |                 |         |        |      | 5300     | 5400 | 0.1561 |        |          | -13       |
|                 |                 |         |        |      | 5200     | 5300 | 0.1380 |        |          | -83       |
|                 |                 |         |        |      | 5100     | 5200 | 0.2601 |        |          | -428      |
|                 |                 |         |        |      | 5000     | 5100 | 0.1902 |        |          | -471      |
|                 |                 |         |        |      | 4900     | 5000 | 0.0344 |        |          | -179      |
|                 |                 |         |        |      | 4900     | 6000 | 1.9097 |        |          | -739      |
| <u>CANADA</u>   |                 |         |        |      |          |      |        |        |          |           |
| 8.1             | KASKAWULSH      | CA      | 2000   | 2007 |          |      |        |        | -4800000 |           |
| 9.1             | TWEEDSMUIR      | CA      | 2001   | 2007 |          |      |        |        | -2252067 | -5533     |
| <u>CHINA</u>    |                 |         |        |      |          |      |        |        |          |           |
| 10.1            | KANGWURE        | CN      | 1974   | 2008 | 5500     | 6100 | 1.9600 |        |          | -7500     |
| <u>C.I.S.</u>   |                 |         |        |      |          |      |        |        |          |           |
| 11.1            | TS.TUYUKSUYSKIY | SU5075  | 1998   | 2006 | 4150     | 4200 | 0.06   | 10     |          |           |
|                 |                 |         |        |      | 4100     | 4150 | 0.1295 | 1      |          |           |
|                 |                 |         |        |      | 4050     | 4100 | 0.184  | 0      |          |           |
|                 |                 |         |        |      | 4000     | 4050 | 0.133  | 0      |          |           |
|                 |                 |         |        |      | 3950     | 4000 | 0.126  | 0      |          |           |
|                 |                 |         |        |      | 3900     | 3950 | 0.1145 | 1      |          |           |
|                 |                 |         |        |      | 3850     | 3900 | 0.1375 | -3     |          |           |
|                 |                 |         |        |      | 3800     | 3850 | 0.2105 | 3      |          |           |
|                 |                 |         |        |      | 3750     | 3800 | 0.4105 | 35     | -874     | -2225     |
|                 |                 |         |        |      | 3700     | 3750 | 0.3985 | -39    | -680     | -1628     |
|                 |                 |         |        |      | 3650     | 3700 | 0.2170 | 20     | -799     | -3852     |
|                 |                 |         |        |      | 3600     | 3650 | 0.1080 | -2     | -626     | -5743     |
|                 |                 |         |        |      | 3550     | 3600 | 0.1170 | -34    | -1266    | -9416     |
|                 |                 |         |        |      | 3500     | 3550 | 0.1330 | 2      | -1385    | -10473    |
|                 |                 |         |        |      | 3450     | 3500 | 0.0525 | -15    | -772     | -12846    |
|                 |                 |         |        |      | 3450     | 4200 | 2.532  | -22    |          |           |
| <u>COLOMBIA</u> |                 |         |        |      |          |      |        |        |          |           |
| 12.1            | LA CONEJERA     | CO0033  | 2009   | 2009 | 4817     | 4958 | 0.0127 | 0      | 0        | 281       |
|                 |                 |         |        |      | 4799     | 4817 | 0.0756 | 0      | -0.05    | -653      |
|                 |                 |         |        |      | 4754     | 4799 | 0.0366 | 0      | -0.01    | -405      |
|                 |                 |         |        |      | 4717     | 4754 | 0.0591 | 0      | -0.06    | -931      |
|                 |                 |         |        |      | 4717     | 4958 | 0.1840 | 0      | -0.12    | -629      |
| 12.2            | LA CONEJERA     | CO0033  | 2010   | 2010 | 4817     | 4958 | 0.0127 | 0      | 0        | -81       |
|                 |                 |         |        |      | 4799     | 4817 | 0.0756 | 0      | -0.07    | -888      |
|                 |                 |         |        |      | 4754     | 4799 | 0.0366 | 0      | -0.01    | -354      |
|                 |                 |         |        |      | 4721     | 4754 | 0.0591 | 0      | -0.06    | -967      |
|                 |                 |         |        |      | 4715     | 4721 | 0.0365 | 0      | -0.03    | -785      |
|                 |                 |         |        |      | 4715     | 4958 | 0.2205 | 0      | -0.17    | -757      |
| <u>GERMANY</u>  |                 |         |        |      |          |      |        |        |          |           |
| 13.1            | HOELLENTAL      | DE0003  | 1999   | 2006 | 2560     | 2580 | 0.0002 | -0.038 | -0.14    | -1157     |
|                 |                 |         |        |      | 2540     | 2560 | 0.0027 | -0.461 | -4.04    | -1409     |
|                 |                 |         |        |      | 2520     | 2540 | 0.0032 | 0.107  | -10.79   | -3316     |
|                 |                 |         |        |      | 2500     | 2520 | 0.0031 | -0.868 | -18.19   | -4949     |
|                 |                 |         |        |      | 2480     | 2500 | 0.0057 | -0.74  | -35.61   | -5829     |
|                 |                 |         |        |      | 2460     | 2480 | 0.0085 | -0.204 | -48.08   | -5665     |
|                 |                 |         |        |      | 2440     | 2460 | 0.0100 | -1.064 | -62.49   | -6008     |
|                 |                 |         |        |      | 2420     | 2440 | 0.0130 | -1.505 | -78.48   | -5714     |
|                 |                 |         |        |      | 2400     | 2420 | 0.0187 | -2.713 | -117.31  | -5838     |
|                 |                 |         |        |      | 2380     | 2400 | 0.0212 | 0.047  | -141.33  | -6717     |

| NR               | GLACIER NAME          | PSFG NR | PERIOD |      | ALTITUDE |      | AREA     |         | VOLUME  | THICKNESS |
|------------------|-----------------------|---------|--------|------|----------|------|----------|---------|---------|-----------|
|                  |                       |         | FROM   | TO   | FROM     | TO   | SY       | CHANGE  |         |           |
|                  |                       |         |        |      | 2360     | 2380 | 0.0219   | -0.965  | -142.52 | -6386     |
|                  |                       |         |        |      | 2340     | 2360 | 0.0283   | -2.264  | -163.77 | -5584     |
|                  |                       |         |        |      | 2320     | 2340 | 0.0253   | -0.013  | -170.18 | -6826     |
|                  |                       |         |        |      | 2300     | 2320 | 0.0225   | 0.786   | -153.81 | -6968     |
|                  |                       |         |        |      | 2280     | 2300 | 0.0202   | -0.239  | -153.42 | -7676     |
|                  |                       |         |        |      | 2260     | 2280 | 0.0188   | 0.087   | -149.94 | -7965     |
|                  |                       |         |        |      | 2240     | 2260 | 0.0131   | -0.335  | -122.89 | -9492     |
|                  |                       |         |        |      | 2220     | 2240 | 0.0067   | 0.56    | -73.36  | -12157    |
|                  |                       |         |        |      | 2200     | 2220 | 0.0038   | -0.499  | -39.02  | -10921    |
|                  |                       |         |        |      | 2200     | 2580 | 0.2470   | -10.321 | -1685   | -6717     |
| 14.1             | SCHNEEFERNER N        | DE0001  | 1999   | 2006 | 2800     | 2820 | 0        | -0.152  | -0.02   | -3796     |
|                  |                       |         |        |      | 2780     | 2800 | 0.001608 | -1.017  | -7.27   | -3994     |
|                  |                       |         |        |      | 2760     | 2780 | 0.002934 | -1.747  | -13     | -4101     |
|                  |                       |         |        |      | 2740     | 2760 | 0.005678 | -2.154  | -26.37  | -4393     |
|                  |                       |         |        |      | 2720     | 2740 | 0.007377 | -3.823  | -37.34  | -4843     |
|                  |                       |         |        |      | 2700     | 2720 | 0.011403 | -4.786  | -67.37  | -5278     |
|                  |                       |         |        |      | 2680     | 2700 | 0.024816 | -6.175  | -133.97 | -4985     |
|                  |                       |         |        |      | 2660     | 2680 | 0.034674 | -6.391  | -223.6  | -6013     |
|                  |                       |         |        |      | 2640     | 2660 | 0.046883 | -5.191  | -329.17 | -6724     |
|                  |                       |         |        |      | 2620     | 2640 | 0.049821 | -10.138 | -371.51 | -7572     |
|                  |                       |         |        |      | 2600     | 2620 | 0.038102 | 1.335   | -314.89 | -8815     |
|                  |                       |         |        |      | 2580     | 2600 | 0.033337 | -0.301  | -225.83 | -7310     |
|                  |                       |         |        |      | 2560     | 2580 | 0.044047 | -7.025  | -109.62 | -2888     |
|                  |                       |         |        |      | 2540     | 2560 | 0.00655  | -1.705  | 0.49    | 63        |
|                  |                       |         |        |      | 2540     | 2820 | 0.307    | -49.27  | -1860   | -6080     |
| 15.1             | SCHNEEFERNER S        | DE0002  | 1999   | 2006 | 2680     | 2700 | 0        | -0.108  | -0.11   | 0         |
|                  |                       |         |        |      | 2660     | 2680 | 0.000053 | -3.152  | -2.04   | -5262     |
|                  |                       |         |        |      | 2640     | 2660 | 0.004178 | -3.907  | -16.74  | -3078     |
|                  |                       |         |        |      | 2620     | 2640 | 0.010619 | -4.864  | -48.53  | -3838     |
|                  |                       |         |        |      | 2600     | 2620 | 0.015527 | -4.311  | -82.89  | -5177     |
|                  |                       |         |        |      | 2580     | 2600 | 0.016881 | -6.292  | -59.28  | -3471     |
|                  |                       |         |        |      | 2560     | 2580 | 0.021462 | -3.285  | -45.33  | -2402     |
|                  |                       |         |        |      | 2540     | 2560 | 0.006496 | -2.99   | -9.2    | -1529     |
|                  |                       |         |        |      | 2520     | 2540 | 0.009237 | -2.192  | -20.15  | -2023     |
|                  |                       |         |        |      | 2520     | 2700 | 0.084    | -31.101 | -284    | -3247     |
| <u>GREENLAND</u> |                       |         |        |      |          |      |          |         |         |           |
| 16.1             | FLADE ISBLINK ICE CAP | GL      | 2002   | 2009 |          |      |          |         |         | 210       |
| 16.2             | FLADE ISBLINK ICE CAP | GL      | 2004   | 2008 |          |      |          |         |         | 680       |
| 16.3             | FLADE ISBLINK ICE CAP | GL      | 2004   | 2008 |          |      |          |         |         | 400       |
| <u>INDIA</u>     |                       |         |        |      |          |      |          |         |         |           |
| 17.1             | CHHOTA SHIGRI         | IN      | 2002   | 2010 | 5450     | 6250 | 1.1683   |         |         | 2882      |
|                  |                       |         |        |      | 5400     | 5450 | 1.4253   |         |         | 1455      |
|                  |                       |         |        |      | 5250     | 5300 | 0.8316   |         |         | 928       |
|                  |                       |         |        |      | 5200     | 5250 | 0.9525   |         |         | 617       |
|                  |                       |         |        |      | 5150     | 5200 | 1.1227   |         |         | 633       |
|                  |                       |         |        |      | 5100     | 5150 | 1.0468   |         |         | 385       |
|                  |                       |         |        |      | 5050     | 5100 | 1.1635   |         |         | -246      |
|                  |                       |         |        |      | 5000     | 5050 | 1.2373   |         |         | -608      |
|                  |                       |         |        |      | 4950     | 5000 | 1.2187   |         |         | -950      |
|                  |                       |         |        |      | 4900     | 4950 | 1.0081   |         |         | -1224     |
|                  |                       |         |        |      | 4850     | 4900 | 0.6132   |         |         | -1622     |
|                  |                       |         |        |      | 4800     | 4850 | 0.6500   |         |         | -1919     |
|                  |                       |         |        |      | 4750     | 4800 | 0.9295   |         |         | -2348     |
|                  |                       |         |        |      | 4700     | 4750 | 0.5008   |         |         | -3024     |
|                  |                       |         |        |      | 4650     | 4700 | 0.4952   |         |         | -3544     |

| NR           | GLACIER NAME   | PSFG NR | PERIOD |      | ALTITUDE |      | AREA    |        | VOLUME | THICKNESS |
|--------------|----------------|---------|--------|------|----------|------|---------|--------|--------|-----------|
|              |                |         | FROM   | TO   | FROM     | TO   | SY      | CHANGE |        |           |
|              |                |         |        |      | 4600     | 4650 | 0.3057  |        |        | -3631     |
|              |                |         |        |      | 4550     | 4600 | 0.3095  |        |        | -3812     |
|              |                |         |        |      | 4500     | 4550 | 0.1882  |        |        | -3964     |
|              |                |         |        |      | 4450     | 4500 | 0.2479  |        |        | -4102     |
|              |                |         |        |      | 4400     | 4450 | 0.1546  |        |        | -4555     |
|              |                |         |        |      | 4350     | 4400 | 0.1155  |        |        | -4352     |
|              |                |         |        |      | 4300     | 4350 | 0.0940  |        |        | -3114     |
|              |                |         |        |      | 4050     | 4300 | 0.1525  |        |        | -3065     |
|              |                |         |        |      | 4050     | 6250 | 16.8876 |        |        | -579      |
| <u>IRAN</u>  |                |         |        |      |          |      |         |        |        |           |
| 18.1         | ALMAKOUH       | IR      | 2002   | 2010 | 3197     | 4835 | 3.7000  |        | -63000 | -16790    |
| <u>ITALY</u> |                |         |        |      |          |      |         |        |        |           |
| 19.1         | CALDERONE      | IT1006  | 2005   | 2006 | 2750     | 2830 | 0.0090  | 2      | 22     | 2400      |
|              |                |         |        |      | 2630     | 2750 | 0.0270  | 0      | 18     | 650       |
|              |                |         |        |      | 2630     | 2830 | 0.0360  | 2      | 39     | 1090      |
| 19.2         | CALDERONE      | IT1006  | 2006   | 2007 | 2750     | 2830 | 0.0090  | 0      | -18    | -2000     |
|              |                |         |        |      | 2630     | 2700 | 0.0270  | 0      | -36    | -1350     |
|              |                |         |        |      | 2630     | 2830 | 0.0360  | 0      | -54    | -1500     |
| 19.3         | CALDERONE      | IT1006  | 2007   | 2008 | 2750     | 2830 | 0.0090  | 0      | -2915  | -82       |
|              |                |         |        |      | 2630     | 2700 | 0.0270  | 0      | 12689  | 357       |
|              |                |         |        |      | 2630     | 2830 | 0.0360  | 0      | 9774   |           |
| 19.4         | CALDERONE      | IT1006  | 2009   | 2010 | 2750     | 2830 | 0.0090  | 0      | 8538   | 949       |
|              |                |         |        |      | 2630     | 2750 | 0.0270  | 0      | 16414  | 608       |
|              |                |         |        |      | 2630     | 2830 | 0.0360  | 0      | 24952  | 693       |
| 20.1         | CAMPO SETT.    | IT0997  | 2005   | 2007 | 2840     | 3180 | 0.3200  |        |        | -4471     |
| 20.2         | CAMPO SETT.    | IT0997  | 2007   | 2009 | 2840     | 3180 |         |        |        | -2230     |
| 21.1         | LUPO           | IT0543  | 2008   | 2009 | 2435     | 2760 | 0.2020  |        |        | 704       |
| 21.2         | LUPO           | IT0543  | 2009   | 2010 | 2435     | 2760 |         |        |        | 408       |
| 22.1         | SURETTA MERID. | IT0371  | 2005   | 2006 | 2685     | 2925 |         |        |        | -2707     |
| 22.2         | SURETTA MERID. | IT0371  | 2006   | 2007 | 2685     | 2925 | 0.1800  | -18    |        | -2911     |
| 22.3         | SURETTA MERID. | IT0371  | 2007   | 2008 | 2685     | 2925 |         |        |        | -382      |
| 22.4         | SURETTA MERID. | IT0371  | 2008   | 2009 | 2685     | 2925 |         |        |        | -778      |
| <u>KENYA</u> |                |         |        |      |          |      |         |        |        |           |
| 23.1         | LEWIS          | KE0008  | 2004   | 2010 | 4651     | 4871 | 0.1050  | -31    | -470   | -3900     |
| <u>NEPAL</u> |                |         |        |      |          |      |         |        |        |           |
| 24.1         | AMA DABLAM     | NP      | 1970   | 2007 |          |      | 2.2000  |        |        | -12000    |
| 24.2         | AMA DABLAM     | NP      | 2002   | 2007 |          |      | 2.2000  |        |        | -3100     |
| 25.1         | AMPHU LAPTSE   | NP      | 1970   | 2007 |          |      | 1.5000  |        |        | -10000    |
| 25.2         | AMPHU LAPTSE   | NP      | 2002   | 2007 |          |      | 1.5000  |        |        | -4300     |
| 26.1         | AX010          | NP0005  | 1999   | 2008 | 4968     | 5302 | 0.3800  |        |        | -7290     |

| NR              | GLACIER NAME       | PSFG NR | PERIOD |      | ALTITUDE |      | AREA<br>SY | AREA<br>CHANGE | VOLUME<br>CHANGE | THICKNESS<br>CHANGE |
|-----------------|--------------------|---------|--------|------|----------|------|------------|----------------|------------------|---------------------|
|                 |                    |         | FROM   | TO   | FROM     | TO   |            |                |                  |                     |
| 27.1            | CHANGRI NUP / SHAR | NP      | 1970   | 2007 |          |      | 13.0000    |                |                  | -11600              |
| 27.1            | CHANGRI NUP / SHAR | NP      | 2002   | 2007 |          |      | 13.0000    |                |                  | -1600               |
| 28.1            | CHUKHUNG           | NP      | 1970   | 2007 |          |      | 3.8000     |                |                  | -5300               |
| 28.2            | CHUKHUNG           | NP      | 2002   | 2007 |          |      | 3.8000     |                |                  | 200                 |
| 29.1            | DUWO               | NP      | 1970   | 2007 |          |      | 1.0000     |                |                  | -12200              |
| 29.2            | DUWO               | NP      | 2002   | 2007 |          |      | 1.0000     |                |                  | -10900              |
| 30.1            | KHUMBU             | NP      | 1970   | 2007 |          |      | 17.0000    |                |                  | -11100              |
| 30.2            | KHUMBU             | NP      | 2002   | 2007 |          |      | 17.0000    |                |                  | -2500               |
| 31.1            | LHOTSE             | NP      | 1970   | 2007 |          |      | 6.5000     |                |                  | -10700              |
| 31.1            | LHOTSE             | NP      | 2002   | 2007 |          |      | 6.5000     |                |                  | -6100               |
| 32.1            | LHOTSE NUP         | NP      | 1970   | 2007 |          |      | 1.9500     |                |                  | -7600               |
| 32.2            | LHOTSE NUP         | NP      | 2002   | 2007 |          |      | 1.9500     |                |                  | -5700               |
| 33.1            | LHOTSE SHAR / IMJA | NP      | 1970   | 2007 | 5055     | 5800 | 10.7000    |                |                  | -20600              |
| 33.2            | LHOTSE SHAR / IMJA | NP      | 2002   | 2007 | 5055     | 5800 | 10.7000    |                |                  | -8100               |
| 34.1            | NUPTSE             | NP      | 1970   | 2007 |          |      | 4.0000     |                |                  | -9400               |
| 34.2            | NUPTSE             | NP      | 2002   | 2007 |          |      | 4.0000     |                |                  | -2200               |
| 35.1            | RIKHA SAMBA        | NP0012  | 1999   | 2010 | 5346     | 6229 | 4.6200     |                |                  | -4790               |
| 36.1            | YALA               | NP0004  | 1996   | 2009 | 5086     | 5642 | 1.8800     |                |                  | -10400              |
| <u>SLOVENIA</u> |                    |         |        |      |          |      |            |                |                  |                     |
| 37.1            | TRIGLAVSKI LEDENIK | SI      | 2005   | 2008 | 2410     | 2510 | 0.0060     | -1             | -9               |                     |
| <u>SPAIN</u>    |                    |         |        |      |          |      |            |                |                  |                     |
| 38.1            | MALADETA           | ES9020  | 2005   | 2006 | 3075     | 3190 | 0.1564     | -13            |                  | -2718               |
|                 |                    |         |        |      | 3050     | 3075 | 0.0468     | 4              |                  | -2816               |
|                 |                    |         |        |      | 3025     | 3050 | 0.0374     | 0              |                  | -1603               |
|                 |                    |         |        |      | 3000     | 3025 | 0.0195     | -2             |                  | -2383               |
|                 |                    |         |        |      | 2975     | 3000 | 0.0159     | -1             |                  | -2418               |
|                 |                    |         |        |      | 2950     | 2975 | 0.0104     | -3             |                  | -4880               |
|                 |                    |         |        |      | 2925     | 2950 | 0.0091     | 0              |                  | -3080               |
|                 |                    |         |        |      | 2900     | 2925 | 0.0084     | 0              |                  | -3563               |
|                 |                    |         |        |      | 2875     | 2900 | 0.0061     | -1             |                  | -3930               |
|                 |                    |         |        |      | 2850     | 2875 | 0.0028     | 0              |                  | -4580               |
|                 |                    |         |        |      | 2825     | 2850 | 0.0002     | 0              |                  | -2914               |
|                 |                    |         |        |      | 2825     | 3190 | 0.3129     | -15            | -992             |                     |
| 38.2            | MALADETA           | ES9020  | 2006   | 2007 | 3075     | 3190 | 0.1526     | -4             |                  | -815                |
|                 |                    |         |        |      | 3050     | 3075 | 0.0331     | -14            |                  | -428                |
|                 |                    |         |        |      | 3025     | 3050 | 0.0239     | -13            |                  | -737                |
|                 |                    |         |        |      | 3000     | 3025 | 0.0171     | -2             |                  | -1286               |
|                 |                    |         |        |      | 2975     | 3000 | 0.0127     | -3             |                  | -2499               |
|                 |                    |         |        |      | 2950     | 2975 | 0.0098     | -1             |                  | -2521               |
|                 |                    |         |        |      | 2925     | 2950 | 0.0082     | -1             |                  | -2720               |
|                 |                    |         |        |      | 2900     | 2925 | 0.0084     | 0              |                  | -3094               |

| NR                 | GLACIER NAME | PSFG NR | PERIOD |      | ALTITUDE |      | AREA   |        | VOLUME | THICKNESS |
|--------------------|--------------|---------|--------|------|----------|------|--------|--------|--------|-----------|
|                    |              |         | FROM   | TO   | FROM     | TO   | SY     | CHANGE |        |           |
|                    |              |         |        |      | 2875     | 2900 | 0.0066 | 0      |        | -2977     |
|                    |              |         |        |      | 2850     | 2875 | 0.0030 | 0      |        | -3452     |
|                    |              |         |        |      | 2825     | 2850 | 0.0002 | 0      |        | -3120     |
|                    |              |         |        |      | 2825     | 3190 | 0.2757 | -37    | -593   |           |
| 38.3               | MALADETA     | ES9020  | 2007   | 2008 | 3088     | 3213 | 0.1374 | -4     |        | 1330      |
|                    |              |         |        |      | 3063     | 3088 | 0.0367 | 2      |        | 300       |
|                    |              |         |        |      | 3038     | 3063 | 0.0371 | 7      |        | 100       |
|                    |              |         |        |      | 3013     | 3038 | 0.0206 | 1      |        | 1060      |
|                    |              |         |        |      | 2988     | 3013 | 0.0164 | 2      |        | 130       |
|                    |              |         |        |      | 2963     | 2988 | 0.0122 | 1      |        | 0         |
|                    |              |         |        |      | 2938     | 2963 | 0.0096 | 1      |        | 0         |
|                    |              |         |        |      | 2913     | 2938 | 0.0088 | 0      |        | -1120     |
|                    |              |         |        |      | 2888     | 2913 | 0.0068 | -1     |        | -800      |
|                    |              |         |        |      | 2863     | 2888 | 0.0050 | 0      |        | -1500     |
|                    |              |         |        |      | 2838     | 2863 | 0.0011 | 0      |        | -800      |
|                    |              |         |        |      | 2838     | 3213 | 0.2917 | 9      |        | 678       |
| 38.4               | MALADETA     | ES9020  | 2008   | 2009 | 3138     | 3163 | 0.0383 | -2     |        | -1100     |
|                    |              |         |        |      | 3113     | 3138 | 0.0371 | -1     |        | 1800      |
|                    |              |         |        |      | 3088     | 3113 | 0.0372 | -1     |        | -600      |
|                    |              |         |        |      | 3063     | 3088 | 0.0375 | 1      |        | -3100     |
|                    |              |         |        |      | 3038     | 3063 | 0.0339 | -3     |        | -1700     |
|                    |              |         |        |      | 3013     | 3038 | 0.0176 | -3     |        | -2700     |
|                    |              |         |        |      | 2988     | 3013 | 0.0140 | -2     |        | -2900     |
|                    |              |         |        |      | 2963     | 2988 | 0.0114 | -1     |        | -2800     |
|                    |              |         |        |      | 2938     | 2963 | 0.0083 | -1     |        | -3700     |
|                    |              |         |        |      | 2913     | 2938 | 0.0078 | -1     |        | -3200     |
|                    |              |         |        |      | 2888     | 2913 | 0.0081 | 1      |        | -3700     |
|                    |              |         |        |      | 2863     | 2888 | 0.0034 | -2     |        | -3900     |
|                    |              |         |        |      | 2838     | 2863 | 0.0011 | 0      |        | -3200     |
|                    |              |         |        |      | 2838     | 3163 | 0.2556 | -15    |        | -1541     |
| 38.5               | MALADETA     | ES9020  | 2009   | 2010 | 3138     | 3163 | 0.0397 | 1.387  |        | 600       |
|                    |              |         |        |      | 3113     | 3138 | 0.0374 | 0.32   |        | -500      |
|                    |              |         |        |      | 3088     | 3113 | 0.0368 | -0.425 |        | 300       |
|                    |              |         |        |      | 3063     | 3088 | 0.0361 | -1.355 |        | 2700      |
|                    |              |         |        |      | 3038     | 3063 | 0.0341 | 0.206  |        | 600       |
|                    |              |         |        |      | 3013     | 3038 | 0.0173 | -0.312 |        | 800       |
|                    |              |         |        |      | 2988     | 3013 | 0.0142 | 0.195  |        | 0         |
|                    |              |         |        |      | 2963     | 2988 | 0.0115 | 0.146  |        | -500      |
|                    |              |         |        |      | 2938     | 2963 | 0.0084 | 0.106  |        | -200      |
|                    |              |         |        |      | 2913     | 2938 | 0.0075 | -0.265 |        | -800      |
|                    |              |         |        |      | 2888     | 2913 | 0.0079 | -0.187 |        | -1600     |
|                    |              |         |        |      | 2863     | 2888 | 0.0036 | 0.129  |        | -2700     |
|                    |              |         |        |      | 2838     | 2863 | 0.0012 | 0.084  |        | 500       |
|                    |              |         |        |      | 2838     | 3163 | 0.2557 | 0.029  |        | 441       |
| <u>SWITZERLAND</u> |              |         |        |      |          |      |        |        |        |           |
| 39.1               | ADLER        | CH0016B | 2005   | 2009 |          |      | 2.4700 |        | -2300  | -990      |
| 39.2               | ADLER        | CH0016B | 2009   | 2010 |          |      | 2.4700 | 0      | -1700  | -770      |
| 40.1               | FINDELEN     | CH0016  | 2005   | 2009 | 3900     | 4000 | 0.0018 | 0      | 1      | 620       |
|                    |              |         |        |      | 3800     | 3900 | 0.2437 | 0      | 211    | 868       |
|                    |              |         |        |      | 3700     | 3800 | 0.3141 | 0      | -135   | -429      |
|                    |              |         |        |      | 3600     | 3700 | 0.4886 | -1     | -69    | -140      |
|                    |              |         |        |      | 3500     | 3600 | 1.6173 | 0      | -335   | -207      |
|                    |              |         |        |      | 3400     | 3500 | 2.3866 | 0      | -698   | -293      |
|                    |              |         |        |      | 3300     | 3400 | 1.9445 | 0      | -1429  | -735      |
|                    |              |         |        |      | 3200     | 3300 | 1.8257 | 0      | -2363  | -1294     |



| NR   | GLACIER NAME       | PSFG NR | PERIOD |      | ALTITUDE |      | AREA    |        | VOLUME    | THICKNESS |
|------|--------------------|---------|--------|------|----------|------|---------|--------|-----------|-----------|
|      |                    |         | FROM   | TO   | FROM     | TO   | SY      | CHANGE |           |           |
|      |                    |         |        |      | 3100     | 3200 | 1.7443  | -2     | -4173     | -2392     |
|      |                    |         |        |      | 3000     | 3100 | 0.9631  | -6     | -3401     | -3531     |
|      |                    |         |        |      | 2900     | 3000 | 0.6058  | -28    | -3215     | -5308     |
|      |                    |         |        |      | 2800     | 2900 | 0.3879  | -24    | -3330     | -8586     |
|      |                    |         |        |      | 2700     | 2800 | 0.3152  | -50    | -4308     | -13666    |
|      |                    |         |        |      | 2600     | 2700 | 0.3928  | -59    | -7213     | -18361    |
|      |                    |         |        |      | 2500     | 2600 | 0.0765  | -60    | -1333     | -17426    |
|      |                    |         |        |      | 2500     | 4000 | 13.3079 | -230   | -31790    | -2289     |
| 40.2 | FINDELEN           | CH0016  | 2009   | 2010 | 3900     | 4000 | 0.0020  | 0      | -2        | -1656     |
|      |                    |         |        |      | 3800     | 3900 | 0.2460  | 0      | -167      | -692      |
|      |                    |         |        |      | 3700     | 3800 | 0.3124  | 0      | -134      | -434      |
|      |                    |         |        |      | 3600     | 3700 | 0.4862  | 0      | -313      | -652      |
|      |                    |         |        |      | 3500     | 3600 | 1.6182  | 0      | -932      | -583      |
|      |                    |         |        |      | 3400     | 3500 | 2.3728  | 0      | -1260     | -529      |
|      |                    |         |        |      | 3300     | 3400 | 1.9441  | 0      | -1194     | -610      |
|      |                    |         |        |      | 3200     | 3300 | 1.8154  | 0      | -1225     | -682      |
|      |                    |         |        |      | 3100     | 3200 | 1.7263  | 0      | -1581     | -934      |
|      |                    |         |        |      | 3000     | 3100 | 0.9726  | 0      | -1106     | -1113     |
|      |                    |         |        |      | 2900     | 3000 | 0.5839  | 0      | -930      | -1581     |
|      |                    |         |        |      | 2800     | 2900 | 0.3489  | 0      | -772      | -2286     |
|      |                    |         |        |      | 2700     | 2800 | 0.2512  | 0      | -813      | -3559     |
|      |                    |         |        |      | 2600     | 2700 | 0.3200  | 0      | -1443     | -4861     |
|      |                    |         |        |      | 2500     | 2600 | 0.0817  | 0      | -592      | -6900     |
|      |                    |         |        |      | 2500     | 4000 | 13.0815 | 0      | -12464    | -963      |
| 41.1 | GRIES              | CH0003  | 2003   | 2007 | 2415     | 3307 |         |        |           | -2106     |
| 42.1 | SILVRETTA          | CH0090  | 2003   | 2007 | 2467     | 3079 |         |        |           | -4856     |
|      | <u>U.S.A.</u>      |         |        |      |          |      |         |        |           |           |
| 43.1 | BARNARD            | US0615  | 2003   | 2007 | 550      | 1890 |         |        | -684444   | -3422     |
| 44.1 | BERING             | US      | 2003   | 2007 | 200      | 3230 |         |        | -23070667 | -6356     |
| 45.1 | GUYOT NORTH BRANCH | US      | 2005   | 2007 |          |      |         |        | -1086000  | -4022     |
| 46.1 | GUYOT SOUTH BRANCH | US      | 2005   | 2007 |          |      |         |        | 241778    | 1422      |
| 47.1 | HIDDEN             | US      | 2005   | 2007 |          |      |         |        | -194978   | -4756     |
| 48.1 | HUBBARD            | US1290  | 2003   | 2007 | 0        | 5800 |         |        | 10608000  | 3467      |
| 49.1 | KLUTLAN            | US      | 2003   | 2007 |          |      |         |        | -1284889  | -2178     |
| 50.1 | LOGAN              | US      | 2003   | 2007 |          |      |         |        | -1057778  | -1556     |
| 51.1 | MALASPINA          | US      | 2003   | 2007 |          |      |         |        | -15497778 | -4889     |
| 52.1 | NOVATAK            | US      | 2005   | 2007 |          |      |         |        | -453000   | -3356     |
| 53.1 | STELLER            | US      | 2003   | 2007 |          |      |         |        | -1156800  | -1600     |
| 54.1 | TANA               | US      | 2003   | 2007 |          |      |         |        | -181111   | -222      |
| 55.1 | WALSH              | US      | 2003   | 2007 |          |      |         |        | -1966667  | -5556     |
| 56.1 | WEST NUNATAK       | US      | 2005   | 2007 |          |      |         |        | -141556   | -1556     |
| 57.1 | YAHTSE             | US      | 2000   | 2007 |          |      |         |        | -6743333  | -6611     |

| NR   | GLACIER NAME | PSFG NR | PERIOD |      | ALTITUDE |      | AREA |        | VOLUME   | THICKNESS |
|------|--------------|---------|--------|------|----------|------|------|--------|----------|-----------|
|      |              |         | FROM   | TO   | FROM     | TO   | SY   | CHANGE |          |           |
| 58.1 | YAKUTAT      | US1303  | 2005   | 2007 | 0        | 1520 |      |        | -2242533 | -6178     |





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| <p>WORLD GLACIER MONITORING SERVICE</p> <p><b>ALPHABETIC INDEX</b></p> |
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|                              |   |
|------------------------------|---|
| GLACIER NAME                 | 15 alphabetic or numeric digits, names arranged in alphabetic order   |
| PSFG NUMBER                  | 5 digits identifying glacier with alphabetic prefix denoting country  |
| WGMS ID                      | 5 digits, identifying glacier in the WGMS-data base   |
| DATA TABLE AND RECORD NUMBER | <p>Table and record number where data are located</p> <p>A = General information on the observed glacier</p> <p>B = Variations in the position of glacier fronts: 2005–2010</p> <p>BB = Variations in the position of glacier fronts: addenda from earlier years</p> <p>C = Mass balance summary data: 2005–2010</p> <p>CC = Mass balance summary data: addenda from earlier years</p> <p>CCC = Mass balance versus altitude for selected glaciers</p> <p>D = Changes in area, volume and thickness</p> <p>F = Index measurements or special events – see Chapter 4</p> |

| GLACIER NAME              | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |         |
|---------------------------|---------|---------|------------------------------|-------|-------|---------|
| AALFOTBREEN               | NO36204 | 317     | A.546                        |       | C.72  | CCC.39  |
| ADAMS                     | NZ      | 2923    | A.444                        | B.373 |       |         |
| ADLER                     | CH0016B | 3801    | A.635                        |       |       | D.39    |
| AGNELLO MER.              | IT0029  | 684     | A.309                        | B.254 |       |         |
| AILSA                     | NZ      | 2924    | A.445                        |       |       | F       |
| AKULLIIT                  | GL      | 3733    | A.217                        | B.176 |       |         |
| ALBIGNA                   | CH0116  | 1674    | A.636                        | B.509 |       |         |
| ALDEGONDABREEN            | NO14108 | 3470    | A.547                        | B.439 |       |         |
| ALLALIN                   | CH0011  | 394     | A.637                        | B.510 |       |         |
| ALMAKOUH                  | IR      | 3695    | A.308                        |       |       | D.18    |
| ALMER/SALISBURY           | NZ      | 1548    | A.446                        | B.374 |       | F       |
| ALPAMAYO                  | PE      | 3612    | A.601                        | B.483 |       |         |
| ALPEINER F.               | AT0307  | 497     | A.31                         | B.17  |       |         |
| ALPETLI(KANDER)           | CH0109  | 439     | A.638                        | B.511 |       |         |
| ALTA (VEDRETTA) / HOHENF. | IT0730  | 632     | A.310                        | B.255 |       |         |
| AMA DABLAM                | NP      | 3459    | A.429                        |       |       | D.24    |
| AMEGHINO                  | AR      | 3800    | A.4                          |       | BB.1  |         |
| AMMERTEN                  | CH0111  | 435     | A.639                        | B.512 |       |         |
| AMOLA                     | IT0644  | 638     | A.311                        | B.256 |       |         |
| AMPHU LAPTSE              | NP      | 3460    | A.430                        |       |       | D.25    |
| ANDY                      | NZ      | 1590    | A.447                        | B.375 |       |         |
| ANETO                     | ES9030  | 943     | A.617                        | B.493 |       |         |
| ANTELAO INFERIORE (OCC.)  | IT0967  | 642     | A.312                        | B.257 |       |         |
| ANTELAO SUP.              | IT0966  | 643     | A.313                        | B.258 |       |         |
| ANTIZANA15ALPHA           | EC0001  | 1624    | A.202                        | B.168 | C.36  | CCC.23  |
| AOUILLE                   | IT0138  | 1239    | A.314                        | B.259 |       |         |
| ARGENTIERE                | FR0002  | 354     | A.203                        | B.169 | BB.19 | C.37    |
| AROLLA (BAS)              | CH0027  | 377     | A.640                        | B.513 |       |         |
| ARTESONRAJU               | PE0003  | 3292    | A.602                        | B.484 | C.94  | CCC.59  |
| ASHBURTON                 | NZ      | 1570    | A.448                        | B.376 |       |         |
| ASHU-TOR SOUTH (326)      | SU      | 3771    | A.169                        | B.138 |       |         |
| ASSAKAAT                  | GL      | 3734    | A.218                        | B.177 |       |         |
| AUSTDALS BREEN            | NO37323 | 321     | A.548                        |       | C.73  | CCC.40  |
| AUSTERDALS BREEN          | NO31220 | 288     | A.549                        | B.440 |       |         |
| AUSTRE BROEGGERBREEN      | NO15504 | 292     | A.550                        |       | C.74  | CCC.41  |
| AUSTRE OKSTIND BREEN      | NO      | 3342    | A.551                        | B.441 |       | CCCC.19 |
| AVOCA                     | NZ      | 2928    | A.449                        |       |       |         |
| AX010                     | NP0005  | 906     | A.431                        |       |       | F       |
| AXIUS                     | NZ      | 2283    | A.450                        | B.377 |       | D.26    |
| AZUFRE                    | AR      | 2851    | A.5                          | B.2   |       |         |
| BACHFALLEN F.             | AT0304  | 500     | A.32                         | B.18  |       |         |
| BAEGISARJOEKULL           | IS0304  | 3059    | A.240                        | B.196 |       |         |
| BAERENKOPF K.             | AT0702  | 567     | A.33                         | B.19  |       |         |
| BAGLEY ICE FIELD          | US      | 3663    | A.746                        |       |       | F       |
| BAHIA DEL DIABLO          | AQ      | 2665    | A.1                          | B.1   | C.1   | CCC.1   |
| BALFOUR                   | NZ      | 1604    | A.451                        | B.378 |       |         |
| BARLOW                    | NZ      | 1608    | A.452                        | B.379 |       |         |
| BARNARD                   | US0615  | 165     | A.747                        |       |       | D.43    |
| BARRIER                   | NZ      | 2281    | A.453                        | B.380 |       |         |
| BARRIER PK                | NZ      | 2933    | A.454                        | B.381 |       | F       |
| BARROSO                   | AR      | 3590    | A.6                          | B.3   |       |         |
| BASEI                     | IT0064  | 611     | A.315                        | B.260 |       |         |
| BASODINO                  | CH0104  | 463     | A.641                        | B.514 | C.102 | CCC.67  |
| BATURA                    | PK0005  | 990     | A.598                        | B.480 |       |         |
| BEAR                      | US      | 3372    | A.748                        | B.613 |       |         |
| BELVEDERE (MACUGNAGA)     | IT0325  | 618     | A.316                        | B.261 |       | F       |
| BERGLAS F.                | AT0308  | 496     | A.34                         | B.20  |       |         |
| BERGSETBREEN              | NO31013 | 2290    | A.552                        | B.442 | BB.26 |         |
| BERING                    | US      | 3336    | A.749                        |       |       | D.44    |
| BESSANESE                 | IT0040  | 1297    | A.317                        | B.262 |       |         |
| BIETAL F.                 | AT0105A | 481     | A.35                         | B.21  |       |         |

| GLACIER NAME         | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |  |       |  |        |         |   |
|----------------------|---------|---------|------------------------------|-------|--|-------|--|--------|---------|---|
| BIETAL F. W          | AT0105B | 1452    | A.36                         | B.22  |  |       |  |        |         |   |
| BIETALFERNER MITTE   | AT      | 2674    | A.37                         | B.23  |  |       |  |        |         |   |
| BIFERTEN             | CH0077  | 422     | A.642                        | B.515 |  |       |  |        |         |   |
| BIRDZHLYCHIRAN       | SU3026  | 756     | A.170                        | B.139 |  |       |  |        |         |   |
| BITYUKTYUBE          | SU3034  | 764     | A.171                        | B.140 |  |       |  |        |         |   |
| BLAGNIPUJOEKULL      | IS      | 3130    | A.241                        | B.197 |  |       |  |        |         |   |
| BLAIR                | NZ      | 1551    | A.455                        |       |  |       |  |        |         | F |
| BLANC                | FR0031  | 351     | A.204                        | B.170 |  |       |  |        |         |   |
| BLOMSTOELSKARDSBREEN | NO      | 3339    | A.553                        | B.443 |  | C.75  |  | CCC.42 |         |   |
| BLUEMLISALP          | CH0064  | 436     | A.643                        | B.516 |  |       |  |        |         |   |
| BOEDALSBREEN         | NO37219 | 2291    | A.554                        | B.444 |  |       |  |        |         |   |
| BOEVERBREEN          | NO0548  | 2298    | A.555                        | B.445 |  |       |  |        |         |   |
| BOEYABREEN           | NO33014 | 2297    | A.556                        | B.446 |  | BB.27 |  |        |         |   |
| BOLSHOY AZAU         | SU3004  | 701     | A.172                        | B.141 |  |       |  |        |         |   |
| BOLSHOY CHONTOR      | SU      | 3772    | A.173                        | B.142 |  |       |  |        |         |   |
| BONAR                | NZ      | 1587    | A.456                        | B.382 |  |       |  |        |         |   |
| BONDHUSBREA          | NO20408 | 318     | A.557                        | B.447 |  | BB.28 |  |        |         |   |
| BOSSONS              | FR0004  | 355     | A.205                        | B.171 |  | BB.20 |  |        |         |   |
| BOTNABREA            | NO20515 | 2292    | A.558                        | B.448 |  |       |  |        |         |   |
| BOULDER              | US2005  | 1364    | A.750                        | B.614 |  |       |  |        |         |   |
| BOVEYRE              | CH0041  | 459     | A.644                        | B.517 |  |       |  |        |         |   |
| BREIDABLIKKBREA      | NO      | 2671    | A.559                        | B.449 |  | C.76  |  | CCC.43 |         |   |
| BREIDAMJOEKULL W. A. | IS1125A | 3063    | A.242                        | B.198 |  |       |  |        |         |   |
| BREIDAMJOEKULL W. C. | IS1125C | 3065    | A.243                        | B.199 |  |       |  |        |         |   |
| BRENEY               | CH0036  | 368     | A.645                        | B.518 |  |       |  |        |         |   |
| BRENNDALSBREEN       | NO37109 | 2293    | A.560                        | B.450 |  |       |  |        |         |   |
| BRENNKOGI K.         | AT0727  | 528     | A.38                         | B.24  |  |       |  |        |         |   |
| BRENA                | IT0219  | 615     | A.318                        | B.263 |  |       |  |        |         |   |
| BRESCIANA            | CH0103  | 465     | A.646                        | B.519 |  |       |  |        |         |   |
| BREWSTER             | NZ      | 1597    | A.457                        | B.383 |  | C.71  |  | CCC.38 | CCCC.18 | F |
| BRIKSDALSBREEN       | NO37110 | 314     | A.561                        | B.451 |  |       |  |        |         |   |
| BROKARJOEKULL        | IS1427  | 3066    | A.244                        | B.200 |  |       |  |        |         |   |
| BROWNING             | NZ      | 2937    | A.458                        |       |  |       |  |        |         | F |
| BRUARJOEKULL         | IS2400  | 3067    | A.245                        |       |  | C.44  |  |        |         |   |
| BRUNEGG              | CH0020  | 384     | A.647                        | B.520 |  |       |  |        |         |   |
| BRUNNI               | CH0072  | 427     | A.648                        | B.521 |  |       |  |        |         |   |
| BRYANT               | NZ      | 2938    | A.459                        |       |  |       |  |        |         | F |
| BUERBREEN            | NO21307 | 315     | A.562                        | B.452 |  | BB.29 |  |        |         |   |
| BURTON               | NZ      | 1606    | A.460                        | B.384 |  |       |  |        |         |   |
| BUTLER               | NZ      | 1544    | A.461                        | B.385 |  |       |  |        |         | F |
| CALDERAS             | CH0095  | 403     | A.649                        | B.522 |  |       |  |        |         |   |
| CALDERONE            | IT1006  | 1107    | A.319                        | B.264 |  | C.55  |  | CCCC.9 | D.19    | F |
| CAMBRENA             | CH0099  | 399     | A.650                        | B.523 |  |       |  |        |         |   |
| CAMERON              | NZ      | 1565    | A.462                        | B.386 |  |       |  |        |         |   |
| CAMISA               | AR      | 3591    | A.7                          | B.4   |  |       |  |        |         |   |
| CAMPO SETT.          | IT0997  | 1106    | A.320                        | B.265 |  | C.56  |  |        | D.20    |   |
| CANON HISPANO        | AR      | 3592    | A.8                          | B.5   |  |       |  |        |         |   |
| CARE ALTO OR.        | IT0632  | 1148    | A.321                        | B.266 |  |       |  |        |         |   |
| CARESER              | IT0701  | 635     | A.322                        | B.267 |  | C.57  |  | CCC.27 |         | F |
| CARESER CENTRALE     | IT      | 3659    | A.323                        |       |  | C.58  |  | CCC.28 |         |   |
| CARESER OCCIDENTALE  | IT      | 3346    | A.324                        |       |  | C.59  |  | CCC.29 | CCCC.10 |   |
| CARESER ORIENTALE    | IT      | 3345    | A.325                        |       |  | C.60  |  | CCC.30 | CCCC.11 |   |
| CARIA                | NZ      | 1558    | A.463                        |       |  |       |  |        |         | F |
| CAROLINE             | NZ      | 2943    | A.464                        |       |  |       |  |        |         | F |
| CARRINGTON           | NZ      | 2944    | A.465                        |       |  |       |  |        |         | F |
| CASPOGGIO            | IT0435  | 628     | A.326                        | B.268 |  |       |  |        |         |   |
| CASSANDRA OR.        | IT0411  | 1185    | A.327                        | B.269 |  |       |  |        |         |   |
| CASTELLI OR.         | IT0493  | 1162    | A.328                        | B.270 |  |       |  |        |         |   |
| CASTLE CREEK         | CA      | 3349    | A.145                        | B.126 |  |       |  |        |         |   |
| CAVAGNOLI            | CH0119  | 464     | A.651                        | B.524 |  |       |  |        |         |   |
| CEDEC                | IT0503  | 1165    | A.329                        | B.271 |  |       |  |        |         |   |

| GLACIER NAME                   | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |        |        |        |
|--------------------------------|---------|---------|------------------------------|-------|-------|--------|--------|--------|
| CEVED. FORCOLA / FUERKELEF.    | IT0731  | 663     | A.330                        | B.272 |       |        |        |        |
| CEVED. PRINCIPALE / ZUFALLF.   | IT0732  | 662     | A.331                        | B.273 |       |        |        |        |
| CHACALTAYA                     | BO5180  | 1505    | A.137                        | B.123 | C.14  | CCC.11 | D.5    |        |
| CHANCELLOR                     | NZ      | 2945    | A.466                        |       |       |        |        | F      |
| CHANGRI NUP / SHAR             | NP      | 3457    | A.432                        |       |       |        | D.27   |        |
| CHARQUINI NORTE                | BO      | 3718    | A.138                        | BB.11 |       |        |        |        |
| CHARQUINI OESTE                | BO      | 3719    | A.139                        | BB.12 |       |        |        |        |
| CHARQUINI SUR                  | BO      | 2667    | A.140                        | B.124 | BB.13 | C.15   | CCC.12 | CCCC.2 |
| CHARQUINI SURESTE              | BO      | 3720    | A.141                        | BB.14 |       |        |        | D.6    |
| CHEILLON                       | CH0029  | 375     | A.652                        | B.525 |       |        |        |        |
| CHHOTA SHIGRI                  | IN      | 2921    | A.291                        |       | C.53  | CCC.26 | D.17   |        |
| CHICON                         | PE      | 3614    | A.603                        |       |       |        |        | F      |
| CHORABARI                      | IN      | 3640    | A.292                        | B.238 |       |        |        |        |
| CHUKHUNG                       | NP      | 3461    | A.433                        |       |       |        | D.28   |        |
| CHUNGURCHATCHIR                | SU3027  | 757     | A.174                        | B.143 |       |        |        |        |
| CIAMARELLA                     | IT0043  | 1298    | A.332                        | B.274 |       |        |        |        |
| CIARDONEY                      | IT0081  | 1264    | A.333                        | B.275 | C.61  | CCC.31 |        |        |
| CIPRESSES                      | CL0071  | 2008    | A.156                        |       | BB.18 |        |        |        |
| CLAPIER                        | IT0001  | 1286    | A.334                        | B.276 |       |        |        |        |
| CLARIDENFIRN                   | CH0141  | 2660    | A.653                        |       |       |        |        | F      |
| COL DELLA MARE I               | IT0506A | 1167    | A.335                        | B.277 |       |        |        |        |
| COLEMAN                        | US2011  | 1369    | A.751                        | B.615 |       |        |        |        |
| COLIN CAMPBELL                 | NZ      | 2947    | A.467                        | B.387 |       |        |        |        |
| COLLALTO (V. DI) / HOCHGALL F. | IT0927  | 647     | A.336                        | B.278 |       |        |        |        |
| COLLERIN D'ARNAS               | IT0042  | 2349    | A.337                        | B.279 |       |        |        |        |
| COLUMBIA (2057)                | US2057  | 76      | A.752                        | B.616 | C.109 |        |        |        |
| COLUMBIA (627)                 | US0627  | 156     | A.753                        | B.617 |       |        |        |        |
| COMFORTLESSBREEN               | NO      | 3348    | A.563                        |       |       |        |        | F      |
| CORBASSIERE                    | CH0038  | 366     | A.654                        | B.526 |       |        |        |        |
| CORNELIUSSENBREEN              | NO      | 3341    | A.564                        | B.453 |       |        |        |        |
| CORNO                          | CH0120  | 468     | A.655                        | B.527 |       |        |        |        |
| COUPE DE MONEY                 | IT0109  | 1271    | A.338                        | B.280 |       |        |        |        |
| CRISTALLO                      | IT0937  | 644     | A.339                        | B.281 |       |        |        |        |
| CROSLINA                       | CH0121  | 1681    | A.656                        | B.528 |       |        |        |        |
| CROW                           | NZ      | 1564    | A.468                        | B.388 |       |        |        |        |
| DAINTY                         | NZ      | 2287    | A.469                        | B.389 |       |        |        | F      |
| DANIELS                        | US2052  | 83      | A.754                        | B.618 | C.110 |        |        |        |
| DART                           | NZ      | 898     | A.470                        | B.390 |       |        |        |        |
| DAUNKOGEL F.                   | AT0310A | 604     | A.39                         | B.25  |       |        |        |        |
| DEMING                         | US2009  | 1368    | A.755                        | B.619 |       |        |        |        |
| DEVON ICE CAP NW               | CA0431  | 39      | A.146                        |       | C.17  |        |        |        |
| DIEM F.                        | AT0220  | 513     | A.40                         | B.26  |       |        |        |        |
| DINGLESTADT                    | US      | 3382    | A.756                        | B.620 |       |        |        |        |
| DISGRAZIA                      | IT0419  | 2503    | A.340                        | B.282 |       |        |        |        |
| DISPUTE                        | NZ      | 2286    | A.471                        | B.391 |       |        |        |        |
| DJANKUAT                       | SU3010  | 726     | A.175                        |       | C.28  | CCC.18 |        |        |
| DONALD                         | NZ      | 2284    | A.472                        | B.392 |       |        |        |        |
| DONNE                          | NZ      | 1585    | A.473                        | B.393 |       |        |        |        |
| DOSEGU                         | IT0512  | 668     | A.341                        | B.283 |       |        |        |        |
| DOUGLAS (KAR.)                 | NZ      | 1601    | A.474                        | B.394 |       |        |        |        |
| DRANG DRUNG                    | IN      | 3656    | A.293                        | B.239 |       |        |        |        |
| DRUS, GLACIER DE               | FR      | 3696    | A.206                        |       |       |        |        | F      |
| DUNGEL                         | CH0112  | 1678    | A.657                        | B.529 |       |        |        |        |
| DUWO                           | NP      | 3462    | A.434                        |       |       |        | D.29   |        |
| DYNGJUJOEKULL                  | IS2600  | 3068    | A.246                        |       | C.45  |        |        |        |
| DZASSET                        | IT0113  | 2372    | A.342                        | B.284 |       |        |        |        |
| EASTON                         | US2008  | 1367    | A.757                        | B.621 | C.111 |        |        |        |
| ECHAUREN NORTE                 | CL0001B | 1344    | A.157                        |       | C.24  |        |        |        |
| EIGER                          | CH0059  | 442     | A.658                        | B.530 |       |        |        |        |
| EISKAR G.                      | AT1301  | 1632    | A.41                         | B.27  |       |        |        |        |
| ELISEBREEN                     | NO      | 3337    | A.565                        |       | C.77  |        |        |        |



| GLACIER NAME                | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |         |         |
|-----------------------------|---------|---------|------------------------------|-------|-------|---------|---------|
| ELLA                        | NZ      | 2956    | A.475                        |       |       |         | F       |
| EMMONS                      | US2022  | 203     | A.758                        |       | C.112 | CCCC.26 |         |
| EN DARREY                   | CH0030  | 374     | A.659                        | B.531 |       |         |         |
| ENGABREEN                   | NO67011 | 298     | A.566                        | B.454 | C.78  | CCC.44  |         |
| ERCIYES                     | TR      | 3788    | A.745                        | B.612 |       |         |         |
| ESPERANZA NORTE             | AR      | 3711    | A.9                          |       | BB.2  |         |         |
| ESTELLETT                   | IT0208  | 1259    | A.343                        | B.285 |       |         |         |
| EXCELSIOR                   | US      | 3790    | A.759                        | B.622 |       |         |         |
| EXIT                        | US0390  | 86      | A.760                        | B.623 |       |         |         |
| EYJABAKKAJOEKULL            | IS2300  | 3069    | A.247                        |       | C.46  |         |         |
| EYJAFJALLAJOEKULL           | IS0112  | 3353    | A.248                        |       |       |         | F       |
| FAABERGSTOELSBREEN          | NO31015 | 289     | A.567                        | B.455 |       |         |         |
| FAERIE QUEENE               | NZ      | 2958    | A.476                        |       |       |         | F       |
| FALLJOEKULL                 | IS1021  | 3071    | A.249                        | B.201 |       |         |         |
| FEE NORTH                   | CH0013  | 392     | A.660                        | B.532 |       |         | F       |
| FERNAU F.                   | AT0312  | 601     | A.42                         | B.28  |       |         |         |
| FERPECLE                    | CH0025  | 379     | A.661                        | B.533 |       |         |         |
| FIESCHER                    | CH0004  | 471     | A.662                        | B.534 |       |         |         |
| FINDELEN                    | CH0016  | 389     | A.663                        | B.535 | C.103 | CCCC.23 | D.40    |
| FINDLAY                     | NZ      | 2959    | A.477                        |       |       |         | F       |
| FIRNALPELI                  | CH0075  | 424     | A.664                        | B.536 |       |         |         |
| FITZGERALD (GOD)            | NZ      | 2278    | A.478                        | B.395 |       |         |         |
| FJALLSJOEK BY BREIDAMERK.   | IS1024A | 3073    | A.250                        | B.202 |       |         |         |
| FJALLSJOEKULL BY GAMLASEL   | IS1024C | 3074    | A.251                        | B.203 |       |         |         |
| FLAAJOEKULL E 148           | IS1930C | 3076    | A.252                        | B.204 |       |         |         |
| FLADE ISBLINK ICE CAP       | GL      | 3668    | A.219                        |       |       |         | D.16    |
| FOG                         | NZ      | 2962    | A.479                        |       |       |         | F       |
| FOND OCCID.                 | IT0146  | 2380    | A.344                        | B.286 |       |         |         |
| FOND OR.                    | IT0145  | 1243    | A.345                        | B.287 |       |         |         |
| FONT. BIANCA / WEISSBRUNNF. | IT0713  | 1507    | A.346                        | B.288 | C.62  | CCC.32  | CCCC.12 |
| FORGOTTEN COL               | NZ      | 2282    | A.480                        | B.396 |       |         |         |
| FORNI                       | IT0507  | 670     | A.347                        | B.289 |       |         |         |
| FORNO                       | CH0102  | 396     | A.665                        | B.537 |       |         |         |
| FOSS                        | US2053  | 84      | A.761                        | B.624 | C.113 |         |         |
| FOURNEAUX                   | IT0027  | 1294    | A.348                        | B.290 |       |         |         |
| FOX                         | NZ      | 1536    | A.481                        | B.397 |       |         |         |
| FRADUSTA                    | IT0950  | 2273    | A.349                        | B.291 |       |         |         |
| FRANKLIN                    | NZ      | 2964    | A.482                        |       |       |         | F       |
| FRANZ JOSEF                 | NZ      | 899     | A.483                        | B.398 | BB.25 |         |         |
| FREIGER F.                  | AT0320  | 595     | A.43                         | B.29  |       |         |         |
| FREIWAND K.                 | AT0706  | 564     | A.44                         | B.30  |       |         |         |
| FRESHFIELD                  | NZ      | 2966    | A.484                        | B.399 |       |         |         |
| FREYA                       | GL      | 3350    | A.220                        | B.178 | C.42  | CCC.24  | CCCC.8  |
| FRIAS                       | AR5004  | 1347    | A.10                         |       | BB.3  |         |         |
| FROSNITZ K.                 | AT0507  | 579     | A.45                         | B.31  |       |         |         |
| FURTSCHAGL K.               | AT0406  | 585     | A.46                         | B.32  |       |         |         |
| GAISKAR F.                  | AT0325  | 530     | A.47                         | B.33  |       |         |         |
| GAISSBERG F.                | AT0225  | 508     | A.48                         | B.34  |       |         |         |
| GAJAP-YANACARCO             | PE0009  | 223     | A.604                        | B.485 |       |         |         |
| GAMCHI                      | CH0061  | 440     | A.666                        | B.538 |       |         |         |
| GANGOTRI                    | IN0019  | 3639    | A.294                        | B.240 |       |         |         |
| GANGSTANG                   | IN0077  | 3631    | A.295                        | B.241 |       |         |         |
| GARABASHI                   | SU3031  | 761     | A.176                        | B.144 | C.29  | CCC.19  |         |
| GAULI                       | CH0052  | 449     | A.667                        | B.539 |       |         |         |
| GEBROULAZ                   | FR0009  | 352     | A.207                        | B.172 | C.38  |         |         |
| GEITLANDSJOEKULL            | IS      | 3128    | A.253                        | B.205 |       |         |         |
| GELTEN                      | CH0113  | 1679    | A.668                        | B.540 |       |         |         |
| GENDARME                    | NZ      | 2967    | A.485                        |       |       |         | F       |
| GEPATSCH F.                 | AT0202  | 522     | A.49                         | B.35  |       |         |         |
| GHULKIN                     | PK0008  | 996     | A.599                        | B.481 |       |         |         |
| GIETRO                      | CH0037  | 367     | A.669                        | B.541 |       |         |         |

| GLACIER NAME                     | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |      |         |         |      |   |
|----------------------------------|---------|---------|------------------------------|-------|-------|------|---------|---------|------|---|
| GIGJOEKULL                       | IS0112  | 3079    | A.254                        | B.206 |       |      |         |         |      |   |
| GLACIER NO. 10                   | IN      | 3655    | A.296                        | B.242 |       |      |         |         |      |   |
| GLACIER NO. 12                   | IN      | 3657    | A.297                        | B.243 |       |      |         |         |      |   |
| GLACIER NO. 13                   | IN      | 3658    | A.298                        | B.244 |       |      |         |         |      |   |
| GLACIER NO. 9                    | IN      | 3654    | A.299                        | B.245 |       |      |         |         |      |   |
| GLAERNISCH                       | CH0080  | 418     | A.670                        | B.542 |       |      |         |         |      |   |
| GLENMARY                         | NZ      | 1550    | A.486                        | B.400 |       |      |         |         |      | F |
| GLIAIRETTA VAUDET                | IT0168  | 1248    | A.350                        | B.292 |       |      |         |         |      |   |
| GLJUFURARJOEKULL                 | IS0103  | 3080    | A.255                        | B.207 |       |      |         |         |      |   |
| GOESSNITZ K.                     | AT1201  | 532     | A.50                         | B.36  |       |      |         |         |      |   |
| GOLDBERG K.                      | AT0802B | 1305    | A.51                         | B.37  | C.5   |      | CCC.3   |         |      |   |
| GOLETTA                          | IT0148  | 683     | A.351                        | B.293 |       |      |         |         |      |   |
| GORNER                           | CH0014  | 391     | A.671                        | B.543 |       |      |         |         |      |   |
| GR. GOSAU G.                     | AT1101  | 536     | A.52                         | B.38  |       |      |         |         |      |   |
| GRAAFJELLSBREA                   | NO      | 2672    | A.568                        | B.456 | C.79  |      | CCC.45  |         |      |   |
| GRAASUBREEN                      | NO0547  | 299     | A.569                        |       | C.80  |      | CCC.46  |         |      |   |
| GRAN PILASTRO (G.D.) / GLIEDERF. | IT0893  | 652     | A.352                        | B.294 |       |      |         |         |      |   |
| GRAN VAL                         | IT0115  | 2374    | A.353                        | B.295 |       |      |         |         |      |   |
| GRAN VEDRETTA OCC. / HOCHF.      | IT0884  | 2634    | A.354                        | B.296 |       |      |         |         |      |   |
| GRAN VEDRETTA OR. / GRIESSF.     | IT0883  | 2633    | A.355                        | B.297 |       |      |         |         |      |   |
| GRAN ZEBRU                       | IT0502  | 1164    | A.356                        | B.298 |       |      |         |         |      |   |
| GRAND CROUX CENTR.               | IT0111  | 1273    | A.357                        | B.299 |       |      |         |         |      |   |
| GRAND DESERT                     | CH0031  | 373     | A.672                        | B.544 |       |      |         |         |      |   |
| GRAND ETRET                      | IT0134  | 1238    | A.358                        | B.300 | C.63  |      | CCC.33  | CCCC.13 |      |   |
| GRAND PLAN NEVE                  | CH0045  | 455     | A.673                        | B.545 |       |      |         |         |      |   |
| GRANDE D. NEVADO D. PLOMO        | AR      | 3304    | A.11                         |       |       |      |         |         |      | F |
| GREGORIEV                        | SU      | 3779    | A.177                        | B.145 |       |      |         |         |      |   |
| GREWINGK                         | US      | 3791    | A.762                        | B.625 |       |      |         |         |      |   |
| GRIES                            | CH0003  | 359     | A.674                        | B.546 | C.104 | CC.2 | CCC.68  |         | D.41 |   |
| GRIESS(KLAUSEN)                  | CH0074  | 425     | A.675                        | B.547 |       |      |         |         |      |   |
| GRIESSEN(OBWA.)                  | CH0076  | 423     | A.676                        | B.548 |       |      |         |         |      |   |
| GROSSELEND K.                    | AT1001  | 542     | A.53                         | B.39  |       |      |         |         |      |   |
| GROSSER ALETSCHE                 | CH0005  | 360     | A.677                        | B.549 |       |      |         |         |      | F |
| GRUENAU F.                       | AT0315  | 599     | A.54                         | B.40  |       |      |         |         |      |   |
| GRUETTA ORIENT.                  | IT0232  | 2418    | A.359                        | B.301 |       |      |         |         |      |   |
| GULKANA                          | US0200  | 90      | A.763                        |       | C.114 |      | CCCC.27 |         |      |   |
| GUNN                             | NZ      | 1560    | A.487                        | B.401 |       |      |         |         |      | F |
| GURGLER F.                       | AT0222  | 511     | A.55                         | B.41  |       |      |         |         |      |   |
| GUSLAR F.                        | AT0210  | 490     | A.56                         | B.42  |       |      |         |         |      |   |
| GUSSFELDT                        | AR      | 2848    | A.12                         | B.6   |       |      |         |         |      |   |
| GUYOT NORTH BRANCH               | US      | 3552    | A.764                        |       |       |      |         |         | D.45 |   |
| GUYOT SOUTH BRANCH               | US      | 3553    | A.765                        |       |       |      |         |         | D.46 |   |
| HAGAFELLSJOEKULL E               | IS0306  | 3081    | A.256                        | B.208 |       |      |         |         |      |   |
| HAILUOGOU                        | CN0031  | 849     | A.164                        | B.133 |       |      |         |         |      |   |
| HALLSTAETTER G.                  | AT1102  | 535     | A.57                         | B.43  |       |      |         |         |      |   |
| HAMAGURI YUKI                    | JP0001  | 897     | A.427                        |       | C.70  | CC.1 |         |         |      | F |
| HAMTAH                           | IN      | 3044    | A.300                        | B.246 | C.54  |      |         |         |      |   |
| HANSBREEN                        | NO12419 | 306     | A.570                        | B.457 | C.81  |      | CCC.47  |         |      |   |
| HANSEBREEN                       | NO36206 | 322     | A.571                        |       | C.82  |      | CCC.48  |         |      |   |
| HEINABERGSJOEKULL                | IS1829A | 3135    | A.257                        | B.209 |       |      |         |         |      |   |
| HELLSTUGUBREEN                   | NO0511  | 300     | A.572                        | B.458 | C.83  |      | CCC.49  |         |      |   |
| HELM                             | CA0855  | 45      | A.147                        |       | C.18  |      |         |         |      |   |
| HIDDEN                           | US      | 3554    | A.766                        |       |       |      |         |         | D.47 |   |
| HINTEREIS FERNER                 | AT0209  | 491     | A.58                         | B.44  | C.6   |      | CCC.4   |         | D.1  |   |
| HOCHALM K.                       | AT1005  | 538     | A.59                         | B.45  |       |      |         |         |      |   |
| HOCHJOCH F.                      | AT0208  | 492     | A.60                         | B.46  |       |      |         |         |      |   |
| HOELLENTAL                       | DE0003  | 348     | A.214                        |       |       |      |         |         | D.13 |   |
| HOFSJOEKULL E                    | IS0510B | 3088    | A.258                        |       | C.47  |      |         |         |      |   |
| HOFSJOEKULL N                    | IS0510A | 3089    | A.259                        |       | C.48  |      |         |         |      |   |
| HOFSJOEKULL SW                   | IS0510C | 3090    | A.260                        |       | C.49  |      |         |         |      |   |
| HOHLAUB                          | CH      | 3332    | A.678                        | B.550 |       |      |         |         |      |   |

GLACIER NAME                      PSFG NR    WGMS ID              DATA TABLE AND RECORD NUMBER

|                      |         |      |       |       |       |        |         |      |   |
|----------------------|---------|------|-------|-------|-------|--------|---------|------|---|
| HORACE WALKER        | NZ      | 1600 | A.488 | B.402 |       |        |         |      |   |
| HORCONES INFERIOR    | AR5006  | 919  | A.13  | B.7   |       |        |         |      |   |
| HORN K.(SCHOB.)      | AT1202  | 531  | A.61  | B.47  |       |        |         |      |   |
| HORN K.(ZILLER)      | AT0402  | 589  | A.62  | B.48  |       |        |         |      |   |
| HUALCAN              | PE      | 3615 | A.605 |       |       |        |         |      | F |
| HUASCARAN NORTE      | PE      | 3692 | A.606 |       |       |        |         |      | F |
| HUASCARAN SOUTH EAST | PE      | 3702 | A.607 |       |       |        |         |      | F |
| HUBBARD              | US1290  | 87   | A.767 |       |       |        |         | D.48 | F |
| HUEFI                | CH0073  | 426  | A.679 | B.551 |       |        |         |      |   |
| HUMO                 | AR      | 3712 | A.14  | B.8   |       |        |         |      |   |
| HURD                 | AQ      | 3367 | A.2   |       | C.2   |        |         |      |   |
| HYRNINGJSJOEKULL     | IS0100  | 3092 | A.261 | B.210 |       |        |         |      |   |
| ICE WORM             | US2054  | 82   | A.768 | B.626 | C.115 |        |         |      |   |
| INCACHIRIASCA        | PE      | 3613 | A.608 | B.486 |       |        |         |      |   |
| INDREN OCC.          | IT0306  | 1209 | A.360 | B.302 |       |        |         |      |   |
| INN.PIRCHLKAR        | AT0228  | 505  | A.63  | B.49  |       |        |         |      |   |
| IRENE                | NZ      | 2974 | A.489 |       |       |        |         |      | F |
| IRENEBREEN           | NO15402 | 2669 | A.573 | B.459 | C.84  |        |         |      |   |
| IRIK                 | SU3029  | 759  | A.178 | B.146 |       |        |         |      |   |
| IRIKCHAT             | SU3028  | 758  | A.179 | B.147 |       |        |         |      |   |
| ISFALLSGLAC.         | SE0787  | 333  | A.619 | B.495 |       |        |         |      |   |
| IVORY                | NZ      | 900  | A.490 | B.403 |       |        |         |      |   |
| JACK                 | NZ      | 1553 | A.491 |       |       |        |         |      | F |
| JACKSON              | NZ      | 1552 | A.492 |       |       |        |         |      | F |
| JALF                 | NZ      | 1549 | A.493 |       |       |        |         |      | F |
| JAMTAL F.            | AT0106  | 480  | A.64  | B.50  | C.7   | CCC.5  |         | D.2  |   |
| JANKHU UYU           | BO      | 3721 | A.142 |       | BB.15 |        |         |      |   |
| JASPUR               | NZ      | 2979 | A.494 |       |       |        |         |      | F |
| JOEKULKROKUR         | IS0007  | 3094 | A.262 | B.211 |       |        |         |      |   |
| JOHNSONS             | AQ      | 3366 | A.3   |       | C.3   |        |         |      |   |
| JUMEAUX              | IT0280  | 2441 | A.361 | B.303 |       |        |         |      |   |
| JUVFONNE             | NO      | 3661 | A.574 |       | C.85  | CCC.50 |         |      |   |
| KAELBERSPITZ K.      | AT1003  | 540  | A.65  | B.51  |       |        |         |      |   |
| KAHUTEA              | NZ      | 1569 | A.495 | B.404 |       |        |         |      |   |
| KAIKOURAS            | NZ      | 2980 | A.496 |       |       |        |         |      | F |
| KALDALONSJOEKULL     | IS0102  | 3095 | A.263 | B.212 |       |        |         |      |   |
| KALSER BAERENKOPF K. | AT      | 2676 | A.66  | B.52  |       |        |         |      |   |
| KALTWASSER           | CH0007  | 363  | A.680 | B.552 |       |        |         |      |   |
| KANGIUSAQ            | GL      | 3736 | A.221 | B.179 |       |        |         |      |   |
| KANGWURE             | CN      | 3694 | A.165 | B.134 |       |        |         | D.10 |   |
| KARACHAUL            | SU3022  | 835  | A.180 | B.148 |       |        |         |      |   |
| KARLINGER K.         | AT0701  | 568  | A.67  | B.53  |       |        |         |      |   |
| KARSOJIETNA          | SE0798  | 330  | A.620 | B.496 |       |        |         |      |   |
| KASKAWULSH           | CA      | 3669 | A.148 |       |       |        |         | D.8  |   |
| KEA                  | NZ      | 1545 | A.497 |       |       |        |         |      | F |
| KEHLEN               | CH0068  | 431  | A.681 | B.553 |       |        |         |      |   |
| KESSELWAND FERNER    | AT0226  | 507  | A.68  | B.54  | C.8   | CCC.6  |         | D.3  |   |
| KESSJEN              | CH0012  | 393  | A.682 | B.554 |       |        |         |      |   |
| KHUMBU               | NP      | 3458 | A.435 |       |       |        |         | D.30 |   |
| KIRKJUJOEKULL        | IS      | 3129 | A.264 | B.213 |       |        |         |      |   |
| KJENNDALESBREEN      | NO37223 | 2294 | A.575 | B.460 |       |        |         |      |   |
| KLEINEISER K.        | AT0717  | 555  | A.69  | B.55  |       |        |         |      |   |
| KLEINELEND K.        | AT1002  | 541  | A.70  | B.56  |       |        |         |      |   |
| KLEINFLEISS K.       | AT0801  | 547  | A.71  | B.57  | C.9   | CCC.7  |         |      |   |
| KLOSTERTALER M       | AT0102B | 485  | A.72  | B.58  |       |        |         |      |   |
| KLOSTERTALER N       | AT0102A | 486  | A.73  | B.59  |       |        |         |      |   |
| KLUTLAN              | US      | 3557 | A.769 |       |       |        |         | D.49 |   |
| KOELDUKVISLARJ.      | IS2700  | 3096 | A.265 |       | C.50  |        |         |      |   |
| KOETLUJOEKULL        | IS      | 3132 | A.266 | B.214 |       |        |         |      |   |
| KOLPAKOVSKY          | SU      | 3780 | A.181 | B.149 |       |        |         |      |   |
| KONGSVEGEN           | NO15510 | 1456 | A.576 |       | C.86  | CCC.51 | CCCC.20 |      |   |

| GLACIER NAME                      | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |        |         |        |
|-----------------------------------|---------|---------|------------------------------|-------|-------|--------|---------|--------|
| KOPPANGSBREEN                     | NO      | 2309    | A.577                        | B.461 |       |        |         |        |
| KRIMMLER K.                       | AT0501A | 584     | A.74                         | B.60  |       |        |         |        |
| KRIMMLER K. EAST                  | AT0501B | 1309    | A.75                         | B.61  |       |        |         |        |
| KVERKJOEKULL                      | IS2500  | 3097    | A.267                        | B.215 |       |        |         |        |
| KVISLAJOEKULL                     | IS      | 3131    | A.268                        | B.216 |       |        |         |        |
| KYUKYURTLYU                       | SU3033  | 763     | A.182                        | B.150 |       |        |         |        |
| LA CONEJERA                       | CO0033  | 2721    | A.199                        | B.167 | C.34  | CCC.22 | CCCC.7  | D.12   |
| LA MARE (VEDRETTA DE)             | IT0699  | 636     | A.362                        | B.304 |       |        |         |        |
| LA PEROUSE                        | NZ      | 1605    | A.498                        | B.405 |       |        |         |        |
| LAEMMERN                          | CH0063  | 437     | A.683                        | B.555 |       |        |         |        |
| LAENGENTALER F.                   | AT0305  | 499     | A.76                         | B.62  |       |        |         |        |
| LAGO DEL DESIERTO I               | AR      | 3713    | A.15                         |       | BB.4  |        |         |        |
| LAGO DEL DESIERTO II              | AR      | 3714    | A.16                         |       | BB.5  |        |         |        |
| LAGO DEL DESIERTO III             | AR      | 3715    | A.17                         |       | BB.6  |        |         |        |
| LAMBERT                           | NZ      | 1612    | A.499                        | B.406 |       |        |         |        |
| LANA (V. D.) / AEUSSER. LAHNER K. | IT0913  | 650     | A.363                        | B.305 |       |        |         |        |
| LANDECK K.                        | AT0604  | 569     | A.77                         | B.63  |       |        |         |        |
| LANG                              | CH0018  | 386     | A.684                        | B.556 |       |        |         |        |
| LANGDALE                          | NZ      | 2985    | A.500                        |       |       |        |         | F      |
| LANGFJORDJOEKULEN                 | NO85008 | 323     | A.578                        | B.462 | C.87  | CCC.52 |         |        |
| LANGJOEKULL SOUTHERN DOME         | IS      | 3101    | A.269                        |       | C.51  |        |         |        |
| LANGTALER F.                      | AT0223  | 510     | A.78                         | B.64  |       |        |         |        |
| LARES                             | IT0634  | 1149    | A.364                        | B.306 |       |        |         |        |
| LARKINS                           | NZ      | 2986    | A.501                        |       |       |        |         | F      |
| LAUSON                            | IT0116  | 1275    | A.365                        | B.307 |       |        |         |        |
| LAVACCIU                          | IT0129  | 1285    | A.366                        | B.308 |       |        |         |        |
| LAVASSEY                          | IT0144  | 1242    | A.367                        | B.309 |       |        |         |        |
| LAVAZ                             | CH0082  | 416     | A.685                        | B.557 |       |        |         |        |
| LEIRBREEN                         | NO0548  | 301     | A.579                        | B.463 |       |        |         |        |
| LEIRUFJARDARJOEKULL               | IS0200  | 3102    | A.270                        | B.217 |       |        |         |        |
| LEMON CREEK                       | US      | 3334    | A.770                        |       | C.116 | CCC.72 |         |        |
| LENGUA                            | CL1019  | 2034    | A.158                        | B.127 |       |        |         |        |
| LENTA                             | CH0084  | 414     | A.686                        | B.558 |       |        |         |        |
| LEVIY AKTRU                       | SU7102  | 794     | A.183                        | B.151 | C.30  |        |         |        |
| LEWIS                             | KE0008  | 695     | A.428                        | B.369 |       |        |         | D.23   |
| LHOTSE                            | NP      | 3463    | A.436                        |       |       |        |         | D.31   |
| LHOTSE NUP                        | NP      | 3464    | A.437                        |       |       |        |         | D.32   |
| LHOTSE SHAR / IMJA                | NP      | 3465    | A.438                        | B.370 |       |        |         | D.33   |
| LIMMERN                           | CH0078  | 421     | A.687                        | B.559 |       |        |         |        |
| LINDSAY                           | NZ      | 1556    | A.502                        |       |       |        |         | F      |
| LISCHANA                          | CH0098  | 400     | A.688                        | B.560 |       |        |         |        |
| LITZNERGL.                        | AT0101  | 607     | A.79                         | B.65  |       |        |         |        |
| LLAWRENNY                         | NZ      | 1561    | A.503                        |       |       |        |         | F      |
| LOBBIA                            | IT0637  | 1150    | A.368                        | B.310 |       |        |         |        |
| LOCCE SETT.                       | IT0321  | 2462    | A.369                        | B.311 |       |        |         |        |
| LODALSMBREEN                      | NO31019 | 2301    | A.580                        |       | BB.30 |        |         |        |
| LODMUNDARJOEKULL                  | IS0108  | 3103    | A.271                        | B.218 |       |        |         |        |
| LOGAN                             | US      | 3558    | A.771                        |       |       |        |         | D.50   |
| LOS RITACUBAS                     | CO      | 2763    | A.200                        |       | C.35  |        |         |        |
| LOWER CURTIS                      | US2055  | 77      | A.772                        | B.627 | C.117 |        |         |        |
| LUNGA (VEDRETTA) / LANGENF.       | IT0733  | 661     | A.370                        | B.312 | C.64  | CCC.34 | CCCC.14 |        |
| LUPO                              | IT0543  | 1138    | A.371                        | B.313 | C.65  |        |         | D.21   |
| LYELL                             | NZ      | 1567    | A.504                        | B.407 |       |        |         |        |
| LYMAN                             | US      | 3340    | A.773                        | B.628 |       |        |         |        |
| LYNCH                             | US2056  | 81      | A.774                        | B.629 | C.118 |        |         |        |
| LYNGMARKSBRAE                     | GL      | 3737    | A.222                        |       | BB.22 |        |         |        |
| LYS                               | IT0304  | 620     | A.372                        | B.314 |       |        |         |        |
| MACAULAY                          | NZ      | 2280    | A.505                        | B.408 |       |        |         |        |
| MALADETA                          | ES9020  | 942     | A.618                        | B.494 | C.96  | CCC.61 |         | D.38   |
| MALASPINA                         | US      | 3347    | A.775                        |       |       |        |         | D.51 F |
| MALAAVALLE (V. DI) / UEBELTALF.   | IT0875  | 672     | A.373                        | B.315 | C.66  | CCC.35 | CCCC.15 |        |

| GLACIER NAME                     | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |        |         |         |
|----------------------------------|---------|---------|------------------------------|-------|-------|--------|---------|---------|
| MALIY AKTRU                      | SU7100  | 795     | A.184                        | B.152 | C.31  | CCC.20 |         |         |
| MALIY AZAU                       | SU3032  | 762     | A.185                        | B.153 |       |        |         |         |
| MANDRONE                         | IT0639  | 664     | A.374                        | B.316 |       |        |         |         |
| MARION                           | NZ      | 1591    | A.506                        | B.409 |       |        |         |         |
| MARMADUKE DIXON                  | NZ      | 1541    | A.507                        | B.410 |       |        |         | F       |
| MARMAGLACIAEREN                  | SE0799  | 1461    | A.621                        |       | C.97  | CCC.62 |         |         |
| MARMOLADA CENTR.                 | IT0941  | 676     | A.375                        | B.317 |       |        |         |         |
| MAROVIN                          | IT0541  | 2547    | A.376                        | B.318 |       |        |         |         |
| MARTELOT                         | IT0049  | 1301    | A.377                        | B.319 |       |        |         |         |
| MARTIAL ESTE                     | AR      | 2000    | A.18                         |       | C.4   | CCC.2  | CCCC.1  |         |
| MARZELL F.                       | AT0218  | 515     | A.80                         | B.66  |       |        |         |         |
| MATARA                           | PE      | 3616    | A.609                        |       |       |        |         | F       |
| MATHAIAS                         | NZ      | 2997    | A.508                        | B.411 |       |        |         |         |
| MAURER K.(GLO.)                  | AT0714  | 558     | A.81                         | B.67  |       |        |         |         |
| MAURER K.(VEN.)                  | AT0510  | 576     | A.82                         | B.68  |       |        |         |         |
| MC COY                           | NZ      | 1572    | A.509                        | B.412 |       |        |         |         |
| MCCARTY                          | US      | 3396    | A.776                        | B.630 |       |        |         |         |
| McKENZIE                         | NZ      | 3000    | A.510                        |       |       |        |         | F       |
| MEIGHEN ICE CAP                  | CA1335  | 16      | A.149                        |       | C.19  |        |         |         |
| MER DE GLACE                     | FR0003  | 353     | A.208                        | B.173 |       | BB.21  |         | F       |
| MERRIE                           | NZ      | 3001    | A.511                        |       |       |        |         | F       |
| METALILLE                        | NZ      | 2998    | A.512                        | B.413 |       |        |         |         |
| MIDTDALS BREEN                   | NO4302  | 2295    | A.581                        | B.464 |       |        |         |         |
| MIDTRE LOVENBREEN                | NO15506 | 291     | A.582                        |       | C.88  | CCC.53 | CCCC.21 |         |
| MIKELCHIRAN                      | SU3025  | 755     | A.186                        | B.154 |       |        |         |         |
| MIKKAJEKNA                       | SE0766  | 338     | A.622                        | B.497 |       |        |         |         |
| MILAM                            | IN0037  | 3642    | A.301                        | B.247 |       |        |         |         |
| MITTERKAR F.                     | AT0214  | 487     | A.83                         | B.69  |       |        |         |         |
| MITTIVAKKAT                      | GL0019  | 1629    | A.223                        | B.180 | C.43  | CCC.25 |         |         |
| MOIRY                            | CH0024  | 380     | A.689                        | B.561 |       |        |         |         |
| MOMING                           | CH0023  | 381     | A.690                        | B.562 |       |        |         |         |
| MONCIAIR                         | IT0132  | 1237    | A.378                        | B.320 |       |        |         |         |
| MONCORVE                         | IT0131  | 1236    | A.379                        | B.321 |       |        |         |         |
| MONEY                            | IT0110  | 1272    | A.380                        | B.322 |       |        |         |         |
| MONT DURAND                      | CH0035  | 369     | A.691                        | B.563 |       |        |         |         |
| MONT FORT                        | CH0032  | 372     | A.692                        | B.564 |       |        |         |         |
| MONT MINE                        | CH0026  | 378     | A.693                        | B.565 |       |        |         |         |
| MONTANDEYNE                      | IT0128  | 1284    | A.381                        | B.323 |       |        |         |         |
| MORION OR.                       | IT0180  | 1250    | A.382                        | B.324 |       |        |         |         |
| MORSARJOEKULL                    | IS0318  | 3104    | A.272                        | B.219 |       |        |         |         |
| MORTERATSCH                      | CH0094  | 1673    | A.694                        | B.566 |       |        |         |         |
| MOTZFELDT E                      | GL      | 3738    | A.224                        | B.181 |       |        |         |         |
| MOTZFELDT W                      | GL      | 3739    | A.225                        | B.182 |       |        |         |         |
| MUELLER                          | NZ      | 1575    | A.513                        | B.414 |       |        |         |         |
| MULAJOEKULL S                    | IS0311A | 3105    | A.273                        | B.220 |       |        |         | F       |
| MULINET MERID.                   | IT0047  | 2351    | A.383                        | B.325 |       |        |         |         |
| MULINET SETT.                    | IT0048  | 1300    | A.384                        | B.326 |       |        |         |         |
| MULKILA                          | IN0070  | 3630    | A.302                        | B.248 |       |        |         |         |
| MURCHISON                        | NZ      | 1578    | A.514                        | B.415 |       |        |         |         |
| MUTMAL F.                        | AT0227  | 506     | A.84                         | B.70  |       |        |         |         |
| MUTT                             | CH0002  | 472     | A.695                        | B.567 |       |        |         |         |
| NAPASORSUAQ                      | GL      | 3740    | A.226                        | B.183 |       |        |         |         |
| NARDIS OCC.                      | IT0640  | 639     | A.385                        | B.327 |       |        |         |         |
| NARSSAQ BRAE                     | GL0005  | 233     | A.227                        | B.184 |       |        |         |         |
| NARVAEZ GRANDE                   | AR      | 3799    | A.19                         |       | BB.7  |        |         |         |
| NAUTHAGAJOEKULL                  | IS0210  | 3107    | A.274                        | B.221 |       |        |         |         |
| NEL CENTRALE                     | IT0057  | 1303    | A.386                        | B.328 |       |        |         |         |
| NEVES OR. (GH. D.) / NOEFESF. O. | IT0902  | 651     | A.387                        | B.329 |       |        |         |         |
| NIEDERJOCH F.                    | AT0217  | 516     | A.85                         | B.71  |       |        |         |         |
| NIGARDSBREEN                     | NO31014 | 290     | A.583                        | B.465 | BB.31 | C.89   | CCC.54  | CCCC.22 |
| NISCLI                           | IT0633  | 677     | A.388                        | B.330 |       |        |         |         |

| GLACIER NAME                  | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |                |
|-------------------------------|---------|---------|------------------------------|-------|-------|----------------|
| NISQUALLY                     | US2027  | 201     | A.777                        |       | C.119 | CCCC.28        |
| NO. 125 (VODOPADNIY)          | SU7105  | 780     | A.187                        | B.155 | C.32  |                |
| NO.211                        | SU      | 3766    | A.188                        | B.156 |       |                |
| NO.324                        | SU      | 3767    | A.189                        | B.157 |       |                |
| NO.392                        | SU      | 3768    | A.190                        | B.158 |       |                |
| NO.393                        | SU      | 3769    | A.191                        | B.159 |       |                |
| NO.394                        | SU      | 3770    | A.192                        | B.160 |       |                |
| NOISY CREEK                   | US2078  | 1666    | A.778                        |       | C.120 | CCCC.29        |
| NOROESTE                      | CL      | 3724    | A.159                        | B.128 |       |                |
| NORTH KLAUATTI                | US2076  | 1664    | A.779                        |       | C.121 | CCCC.30        |
| NORTHWESTERN                  | US      | 3793    | A.780                        | B.631 |       |                |
| NOVATAK                       | US      | 3556    | A.781                        |       |       | D.52           |
| NUKA                          | US      | 3794    | A.782                        | B.632 |       |                |
| NUPTSE                        | NP      | 3466    | A.439                        |       |       | D.34           |
| OB.GRINDELWALD                | CH0057  | 444     | A.696                        |       | BB.32 |                |
| OBERALETSCHE                  | CH0006  | 361     | A.697                        | B.568 |       |                |
| OBERSULZBACH K.               | AT0502  | 583     | A.86                         | B.72  |       |                |
| OCHSENTALERGL.                | AT0103  | 483     | A.87                         | B.73  |       |                |
| OEDENWINKEL K.                | AT0712  | 559     | A.88                         | B.74  |       |                |
| OELDUFELLSJOEKULL             | IS0114  | 3108    | A.275                        | B.222 |       |                |
| OESTE M                       | CL      | 3725    | A.160                        | B.129 |       |                |
| OESTE N                       | CL      | 3726    | A.161                        | B.130 |       |                |
| OESTE S L                     | CL      | 3727    | A.162                        | B.131 |       |                |
| OESTE S R                     | CL      | 3728    | A.163                        | B.132 |       |                |
| OKPILAK                       | US      | 3795    | A.783                        | B.633 |       |                |
| OSSOUE                        | FR      | 2867    | A.209                        | B.174 | C.39  |                |
| OTEMMA                        | CH0034  | 370     | A.698                        | B.569 |       |                |
| PALON D. MARE LOBO CENTR.     | IT0506B | 2533    | A.389                        | B.331 |       |                |
| PALON DELLA MARE LOBO OR.     | IT0506C | 2534    | A.390                        | B.332 |       |                |
| PALUE                         | CH0100  | 398     | A.699                        | B.570 |       |                |
| PANCHI NALA I                 | IN0046  | 3633    | A.303                        | B.249 |       |                |
| PANCHI NALA II                | IN0048  | 3634    | A.304                        | B.250 |       |                |
| PANEYROSSE                    | CH0044  | 456     | A.700                        | B.571 |       |                |
| PARADIES                      | CH0086  | 412     | A.701                        | B.572 |       |                |
| PARADISINO                    | CH0101  | 397     | A.702                        | B.573 |       |                |
| PARK PASS                     | NZ      | 1559    | A.515                        | B.416 |       | F              |
| PARKACHICK                    | IN      | 3647    | A.305                        | B.251 |       |                |
| PARTEJEKNA                    | SE0763  | 327     | A.623                        | B.498 |       |                |
| PASSUSJIETNA E.               | SE0797  | 331     | A.624                        | B.499 |       |                |
| PASTERZE                      | AT0704  | 566     | A.89                         | B.75  | C.10  | CCC.8          |
| PASTORURI                     | PE0008  | 224     | A.610                        | B.487 |       |                |
| PEIRABROC                     | IT0002  | 1287    | A.391                        | B.333 |       |                |
| PENDENTE (VED.) / HANGENDERF. | IT0876  | 675     | A.392                        | B.334 | C.67  | CCC.36 CCCC.16 |
| PENON                         | AR      | 2850    | A.20                         | B.9   |       |                |
| PETERMANN                     | GL      | 3667    | A.228                        |       |       | F              |
| PEYTO                         | CA1640  | 57      | A.150                        |       | C.20  |                |
| PFAFFEN F.                    | AT0324  | 591     | A.90                         | B.76  |       |                |
| PIEDRAS BLANCAS               | AR      | 3716    | A.21                         |       | BB.8  |                |
| PIODE                         | IT0312  | 619     | A.393                        | B.335 |       |                |
| PISGANA OCC.                  | IT0577  | 666     | A.394                        | B.336 |       |                |
| PIZOL                         | CH0081  | 417     | A.703                        | B.574 | C.105 | CCC.69 CCCC.24 |
| PIZZO FERRE                   | IT0365  | 1181    | A.395                        | B.337 |       |                |
| PIZZO SCALINO                 | IT0443  | 1187    | A.396                        | B.338 |       |                |
| PLACE                         | CA1660  | 41      | A.151                        |       | C.21  |                |
| PLATTALVA                     | CH0114  | 420     | A.704                        | B.575 |       |                |
| POD BULA                      | PL0111  | 1617    | A.614                        | B.491 |       | F              |
| POD CUBRYNA                   | PL0180  | 902     | A.615                        | B.492 |       | F              |
| POPOV                         | SU      | 3782    | A.193                        | B.161 |       |                |
| PORCHABELLA                   | CH0088  | 410     | A.705                        | B.576 |       |                |
| PRAEGRAT K.                   | AT0603  | 570     | A.91                         | B.77  |       |                |
| PRAPIO                        | CH0048  | 453     | A.706                        | B.577 |       |                |

| GLACIER NAME                        | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |       |         |         |      |
|-------------------------------------|---------|---------|------------------------------|-------|-------|-------|---------|---------|------|
| PRE DE BAR                          | IT0235  | 681     | A.397                        | B.339 | BB.24 |       |         |         |      |
| PREDAROSSA                          | IT0408  | 1182    | A.398                        | B.340 |       |       |         |         |      |
| PUNTEGLIAS                          | CH0083  | 415     | A.707                        | B.578 |       |       |         |         |      |
| QINGUA KUJALLEQ                     | GL      | 3743    | A.229                        | B.185 |       |       |         |         |      |
| QUAIRA BIANCA (V. D.) / WEISSK...   | IT0889  | 686     | A.399                        | B.341 |       |       |         |         |      |
| RABOTS GLACIAER                     | SE0785  | 334     | A.625                        | B.500 |       | C.98  | CCC.63  |         |      |
| RAETZLI (PLAINE MORTE)              | CH0065  | 434     | A.708                        |       |       | C.106 |         |         |      |
| RAIKOT                              | PK      | 3665    | A.600                        | B.482 |       |       |         |         |      |
| RAINBOW                             | US2003  | 79      | A.784                        | B.634 |       | C.122 |         |         |      |
| RED                                 | US      | 3335    | A.785                        |       |       |       |         |         | F    |
| REISCHEK                            | NZ      | 1566    | A.516                        | B.417 |       |       |         |         |      |
| REMBESDALSKAAGA                     | NO22303 | 2296    | A.584                        | B.466 |       | C.90  | CCC.55  |         |      |
| RETREAT                             | NZ      | 1542    | A.517                        |       |       |       |         |         | F    |
| RETTENBACH F.                       | AT0212  | 488     | A.92                         | B.78  |       |       |         |         |      |
| REYKJAFJARDARJOEKULL                | IS0300  | 3109    | A.276                        | B.223 |       |       |         |         |      |
| RHONE                               | CH0001  | 473     | A.709                        | B.579 | BB.33 |       |         |         |      |
| RICHARDSON                          | NZ      | 1574    | A.518                        | B.418 |       |       |         |         |      |
| RIDGE                               | NZ      | 1547    | A.519                        |       |       |       |         |         | F    |
| RIED                                | CH0017  | 387     | A.710                        | B.580 |       |       |         |         |      |
| RIES OCC. (V. DI) / RIESERF. WESTL. | IT0930  | 645     | A.400                        | B.342 |       | C.68  | CCC.37  | CCCC.17 |      |
| RIES OR. CENTR. / RIESERF. O. ZEN.  | IT0929  | 646     | A.401                        | B.343 |       |       |         |         |      |
| RIKHA SAMBA                         | NP0012  | 1516    | A.440                        |       |       |       |         |         | D.35 |
| RIUKOJIENTNA                        | SE0790  | 342     | A.626                        | B.501 |       | C.99  | CCC.64  |         |      |
| RJUPNABREKKUJOEKULL                 | IS      | 3136    | A.277                        | B.224 |       |       |         |         |      |
| ROCHEMELON, GLACIER DE              | FR      | 3802    | A.210                        |       |       |       |         |         | F    |
| ROFENKAR F.                         | AT0215  | 518     | A.93                         | B.79  |       |       |         |         |      |
| ROLLESTON                           | NZ      | 1538    | A.520                        | B.419 |       |       |         |         | F    |
| ROLWALING (TRAKARDING)              | NP      | 3672    | A.441                        | B.371 |       |       |         |         |      |
| ROOSEVELT                           | US2012  | 1349    | A.786                        | B.635 |       |       |         |         |      |
| ROSEG                               | CH0092  | 406     | A.711                        | B.581 |       |       |         |         |      |
| ROSENLAUI                           | CH0056  | 445     | A.712                        |       | BB.34 |       |         |         |      |
| ROSIM (VEDR. DI) / ROSIMF.          | IT0754  | 610     | A.402                        | B.344 |       |       |         |         |      |
| ROSSO DESTRO                        | IT0920  | 648     | A.403                        | B.345 |       |       |         |         |      |
| ROTTER KNOPF K.                     | AT      | 3297    | A.94                         | B.80  |       |       |         |         |      |
| ROTFIRN NORD                        | CH0069  | 430     | A.713                        | B.582 |       |       |         |         |      |
| ROTHMOOS F.                         | AT0224  | 509     | A.95                         | B.81  |       |       |         |         |      |
| RUOPSOKJEKNA                        | SE0764  | 340     | A.627                        | B.502 |       |       |         |         |      |
| RUOTESJEKNA                         | SE0767  | 337     | A.628                        | B.503 |       |       |         |         |      |
| RUTOR                               | IT0189  | 612     | A.404                        | B.346 |       |       |         |         |      |
| SAARLOQ                             | GL      | 3744    | A.230                        | B.186 |       |       |         |         |      |
| SAINT SORLIN                        | FR0015  | 356     | A.211                        | B.175 |       | C.40  |         |         |      |
| SALAJEKNA                           | SE0759  | 341     | A.629                        | B.504 |       |       |         |         |      |
| SALEINA                             | CH0042  | 458     | A.714                        | B.583 |       |       |         |         |      |
| SALINILLAS                          | AR      | 3594    | A.22                         | B.10  |       |       |         |         |      |
| SAN JOSE                            | AR      | 3593    | A.23                         | B.11  |       |       |         |         |      |
| SAN LORENZO SUR                     | AR      | 3798    | A.24                         |       | BB.9  |       |         |         |      |
| SANDALEE                            | US2079  | 1667    | A.787                        |       |       | C.123 | CCCC.31 |         |      |
| SANKT ANNA                          | CH0067  | 432     | A.715                        | B.584 |       |       |         |         |      |
| SAQQAQ                              | GL      | 3745    | A.231                        | B.187 |       |       |         |         |      |
| SARDONA                             | CH0091  | 407     | A.716                        | B.585 |       |       |         |         |      |
| SARENNES                            | FR0029  | 357     | A.212                        |       |       | C.41  |         |         |      |
| SATUJOEKULL                         | IS0530  | 3110    | A.278                        | B.225 |       |       |         |         |      |
| SCALETTA                            | CH0115  | 1680    | A.717                        | B.586 |       |       |         |         |      |
| SCERSCEN INFERIORE                  | IT0432  | 1186    | A.405                        | B.347 |       |       |         |         |      |
| SCHALF F.                           | AT0219  | 514     | A.96                         | B.82  |       |       |         |         |      |
| SCHAUFEL F.                         | AT0311  | 602     | A.97                         | B.83  |       |       |         |         |      |
| SCHLADMINGER G.                     | AT1103  | 534     | A.98                         | B.84  |       |       |         |         |      |
| SCHLATEN K.                         | AT0506  | 580     | A.99                         | B.85  |       |       |         |         |      |
| SCHLEGEIS K.                        | AT0405  | 586     | A.100                        | B.86  |       |       |         |         |      |
| SCHMIEDINGER K.                     | AT0726  | 548     | A.101                        | B.87  |       |       |         |         |      |
| SCHNEEFERNER N                      | DE0001  | 346     | A.215                        |       |       |       |         |         | D.14 |

| GLACIER NAME                   | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |  |  |       |      |        |         |      |      |
|--------------------------------|---------|---------|------------------------------|-------|--|--|-------|------|--------|---------|------|------|
| SCHNEEFERNER S                 | DE0002  | 347     | A.216                        |       |  |  |       |      |        |         |      | D.15 |
| SCHNEEGLOCKEN                  | AT0109  | 525     | A.102                        | B.88  |  |  |       |      |        |         |      |      |
| SCHNEELOCH G.                  | AT1104  | 533     | A.103                        | B.89  |  |  |       |      |        |         |      |      |
| SCHWARZBERG                    | CH0010  | 395     | A.718                        | B.587 |  |  |       |      |        |         |      |      |
| SCHWARZENBERG F.               | AT0303  | 501     | A.104                        | B.90  |  |  |       |      |        |         |      |      |
| SCHWARZENSTEIN                 | AT0403  | 588     | A.105                        | B.91  |  |  |       |      |        |         |      |      |
| SCHWARZKARL K.                 | AT0716  | 556     | A.106                        | B.92  |  |  |       |      |        |         |      |      |
| SCHWARZKOEPL K.                | AT0710  | 560     | A.107                        | B.93  |  |  |       |      |        |         |      |      |
| SE KASKASATJ GL                | SE0789  | 329     | A.630                        | B.505 |  |  |       |      |        |         |      |      |
| SEA                            | IT0046  | 1299    | A.406                        | B.348 |  |  |       |      |        |         |      |      |
| SEEWJINEN                      | CH      | 3333    | A.719                        | B.588 |  |  |       |      |        |         |      |      |
| SEPARATION                     | NZ      | 2279    | A.521                        | B.420 |  |  |       |      |        |         |      |      |
| SERMIARSUIT                    | GL      | 3746    | A.232                        | B.188 |  |  |       |      |        |         |      |      |
| SERMIKASSAK                    | GL      | 3747    | A.233                        | B.189 |  |  |       |      |        |         |      |      |
| SERMINNGUAQ                    | GL      | 3748    | A.234                        | B.190 |  |  |       |      |        |         |      |      |
| SERMITSIAQ                     | GL      | 3749    | A.235                        | B.191 |  |  |       |      |        |         |      |      |
| SESVENNA                       | CH0097  | 401     | A.720                        | B.589 |  |  |       |      |        |         |      |      |
| SEX ROUGE                      | CH0047  | 454     | A.721                        | B.590 |  |  |       |      |        |         |      |      |
| SEXEGERTEN F.                  | AT0204  | 520     | A.108                        | B.94  |  |  |       |      |        |         |      |      |
| SFORZELLINA                    | IT0516  | 667     | A.407                        | B.349 |  |  |       |      |        |         |      |      |
| SHALLAP                        | PE0003  | 3293    | A.611                        | B.488 |  |  |       |      |        |         |      |      |
| SHOLES                         | US      | 3295    | A.788                        | B.636 |  |  | C.124 |      |        |         |      |      |
| SIDUJOEKULL E M 177            | IS0015B | 3112    | A.279                        | B.226 |  |  |       |      |        |         |      |      |
| SIEGE                          | NZ      | 1616    | A.522                        | B.421 |  |  |       |      |        |         |      | F    |
| SILVER                         | US2077  | 1665    | A.789                        |       |  |  | C.125 |      |        | CCCC.32 |      |      |
| SILVRETTA                      | CH0090  | 408     | A.722                        | B.591 |  |  | C.107 | CC.3 | CCC.70 |         | D.42 | F    |
| SIMILAUN F.                    | AT      | 3296    | A.109                        | B.95  |  |  |       |      |        |         |      |      |
| SIMMING F.                     | AT0318  | 596     | A.110                        | B.96  |  |  |       |      |        |         |      |      |
| SIMONY K.                      | AT0511  | 575     | A.111                        | B.97  |  |  |       |      |        |         |      |      |
| SISSARISSUT                    | GL      | 3750    | A.236                        | B.192 |  |  |       |      |        |         |      |      |
| SISSONE                        | IT0422  | 2506    | A.408                        | B.350 |  |  |       |      |        |         |      |      |
| SKAFTAFELLSJOEKULL             | IS0419  | 3113    | A.280                        | B.227 |  |  |       |      |        |         |      |      |
| SKALAFELLSJOEKULL              | IS1728A | 3115    | A.281                        | B.228 |  |  |       |      |        |         |      |      |
| SKEIDARARJOEKULL E1            | IS0117A | 3116    | A.282                        | B.229 |  |  |       |      |        |         |      |      |
| SKEIDARARJOEKULL E2            | IS0117B | 3117    | A.283                        | B.230 |  |  |       |      |        |         |      |      |
| SKEIDARARJOEKULL E3            | IS0117C | 3118    | A.284                        | B.231 |  |  |       |      |        |         |      |      |
| SKEIDARARJOEKULL M             | IS      | 3134    | A.285                        | B.232 |  |  |       |      |        |         |      |      |
| SKEIDARARJOEKULL W             | IS0116  | 3119    | A.286                        | B.233 |  |  |       |      |        |         |      |      |
| SLADDEN                        | NZ      | 3611    | A.523                        | B.422 |  |  |       |      |        |         |      |      |
| SLETTJOEKULL                   | IS      | 3133    | A.287                        | B.234 |  |  |       |      |        |         |      |      |
| SNOW WHITE                     | NZ      | 1588    | A.524                        | B.423 |  |  |       |      |        |         |      |      |
| SNOWBALL                       | NZ      | 1589    | A.525                        | B.424 |  |  |       |      |        |         |      |      |
| SNOWY                          | NZ      | 3018    | A.526                        |       |  |  |       |      |        |         |      | F    |
| SOCHES TSANTELEINA             | IT0147  | 1244    | A.409                        | B.351 |  |  |       |      |        |         |      |      |
| SOLDA (VEDRETTA DI) / SULDENF. | IT0762  | 660     | A.410                        | B.352 |  |  |       |      |        |         |      |      |
| SOLHEIMAJOEKULL W              | IS0113A | 3122    | A.288                        | B.235 |  |  | BB.23 |      |        |         |      |      |
| SOQQAAP                        | GL      | 3751    | A.237                        | B.193 |  |  |       |      |        |         |      |      |
| SOUTH CAMERON                  | NZ      | 3019    | A.527                        | B.425 |  |  |       |      |        |         |      |      |
| SOUTH CASCADE                  | US2013  | 205     | A.790                        | B.637 |  |  | C.126 |      |        | CCCC.33 |      |      |
| SOUTH MELVILLE ICE CAP         | CA      | 3690    | A.152                        |       |  |  | C.22  |      |        |         |      |      |
| SPENCER                        | NZ      | 1607    | A.528                        | B.426 |  |  |       |      |        |         |      |      |
| SPIEGEL F.                     | AT0221  | 512     | A.112                        | B.98  |  |  |       |      |        |         |      |      |
| SQUAK                          | US2007  | 1366    | A.791                        | B.638 |  |  |       |      |        |         |      |      |
| ST. JAMES                      | NZ      | 2274    | A.529                        | B.427 |  |  |       |      |        |         |      |      |
| ST.MARY                        | NZ      | 3022    | A.530                        |       |  |  |       |      |        |         |      | F    |
| STEELE                         | CA      | 3331    | A.153                        |       |  |  |       |      |        |         |      | F    |
| STEGHOLTBRENN                  | NO31021 | 313     | A.585                        | B.467 |  |  |       |      |        |         |      |      |
| STEIN                          | CH0053  | 448     | A.723                        | B.592 |  |  |       |      |        |         |      |      |
| STEINDALSBRENN                 | NO      | 2310    | A.586                        | B.468 |  |  |       |      |        |         |      |      |
| STEINLIMMI                     | CH0054  | 447     | A.724                        | B.593 |  |  |       |      |        |         |      |      |
| STELLER                        | US      | 3559    | A.792                        |       |  |  |       |      |        |         |      | D.53 |



| GLACIER NAME             | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |      |        |         |   |
|--------------------------|---------|---------|------------------------------|-------|-------|------|--------|---------|---|
| STOCKING (TEWAEWAE)      | NZ      | 3023    | A.531                        | B.428 |       |      |        |         |   |
| STORBREEN                | NO0541  | 302     | A.587                        | B.469 | C.91  |      | CCC.56 |         |   |
| STORE SUPPHELLEBREEN     | NO33014 | 287     | A.588                        | B.470 |       |      |        |         |   |
| STORGLACIAEREN           | SE0788  | 332     | A.631                        | B.506 | C.100 |      | CCC.65 |         |   |
| STORJUVBREEN             | NO      | 2308    | A.589                        | B.471 |       |      |        |         |   |
| STORSTEINSFJELLBREEN     | NO7381  | 1329    | A.590                        | B.472 |       |      |        |         |   |
| STRAUCHON                | NZ      | 1599    | A.532                        | B.429 |       |      |        |         |   |
| STUART                   | NZ      | 1555    | A.533                        |       |       |      |        | F       |   |
| STUBACHER SONNBLICK KEES | AT0601A | 573     | A.113                        | B.99  | C.11  |      |        |         |   |
| STYGGEDALS BREEN         | NO30720 | 303     | A.591                        | B.473 |       |      |        |         |   |
| SULZ                     | CH0079  | 419     | A.725                        | B.594 |       |      |        |         |   |
| SULZENAU F.              | AT0314A | 600     | A.114                        | B.100 |       |      |        |         |   |
| SULZTAL F.               | AT0301  | 503     | A.115                        | B.101 |       |      |        |         |   |
| SUOTTASJEKNA             | SE0768  | 336     | A.632                        | B.507 |       |      |        |         |   |
| SURETTA                  | CH0087  | 411     | A.726                        | B.595 |       |      |        |         |   |
| SURETTA MERID.           | IT0371  | 2488    | A.411                        | B.353 | C.69  |      |        | D.22    |   |
| SVELGJABREEN             | NO      | 3343    | A.592                        | B.474 | C.92  |      | CCC.57 |         |   |
| SVINAFELLSJOEKULL        | IS0520A | 3124    | A.289                        | B.236 |       |      |        |         |   |
| SYDBREEN                 | NO      | 3351    | A.593                        | B.475 |       |      |        |         |   |
| TAKU                     | US1805  | 124     | A.793                        | B.639 | C.127 | CC.4 |        | F       |   |
| TANA                     | US      | 3560    | A.794                        |       |       |      |        | D.54    |   |
| TARFALAGLACIAEREN        | SE0791  | 326     | A.633                        |       | C.101 |      | CCC.66 |         |   |
| TASCHACH F.              | AT0205  | 519     | A.116                        | B.102 |       |      |        |         |   |
| TASMAN                   | NZ      | 1074    | A.534                        | B.430 |       |      |        | F       |   |
| TAVLEBREEN               | NO      | 3764    | A.594                        | B.476 |       |      |        |         |   |
| TEBENKOF                 | US0414A | 175     | A.795                        | B.640 |       |      |        |         |   |
| TERSKOL                  | SU3030  | 760     | A.194                        | B.162 |       |      |        |         |   |
| TETE ROUSSE              | FR      | 3301    | A.213                        |       |       |      |        | F       |   |
| THULAGI                  | NP0013  | 1535    | A.442                        | B.372 |       |      |        |         |   |
| THURNEYSON               | NZ      | 1554    | A.535                        | B.431 |       |      |        | F       |   |
| TIATSCHA                 | CH0096  | 402     | A.727                        | B.596 |       |      |        |         |   |
| TIEFEN                   | CH0066  | 433     | A.728                        | B.597 |       |      |        |         |   |
| TINGAL GOH               | IN0088  | 3632    | A.306                        | B.252 |       |      |        |         |   |
| TORRE                    | AR      | 3717    | A.25                         |       | BB.10 |      |        |         |   |
| TORRENT                  | IT0155  | 2384    | A.412                        | B.354 |       |      |        |         |   |
| TOTENFELD                | AT0110  | 524     | A.117                        | B.103 |       |      |        |         |   |
| TOTENKOPF K.             | AT      | 2680    | A.118                        | B.104 |       |      |        |         |   |
| TOULES                   | IT0221  | 614     | A.413                        | B.355 |       |      |        |         |   |
| TRAVIGNOLO               | IT0947  | 1514    | A.414                        | B.356 |       |      |        |         |   |
| TRIBOLAZIONE             | IT0112  | 1274    | A.415                        | B.357 |       |      |        |         |   |
| TRIEBENKARLAS F.         | AT0323  | 592     | A.119                        | B.105 |       |      |        |         |   |
| TRIENT                   | CH0043  | 457     | A.729                        | B.598 |       |      |        |         |   |
| TRIFT (GADMEN)           | CH0055  | 446     | A.730                        | B.599 |       |      |        |         |   |
| TRIGLAVSKI LEDENIK       | SI      | 3662    | A.616                        |       |       |      |        | D.37    | F |
| TROLLKYRKJEBREEN         | NO      | 3606    | A.595                        | B.477 |       |      |        |         |   |
| TS.TUYUKSUYSKIY          | SU5075  | 817     | A.195                        | B.163 | C.33  |      | CCC.21 | D.11    |   |
| TSANFLEURON              | CH0033  | 371     | A.731                        | B.600 | C.108 |      | CCC.71 | CCCC.25 |   |
| TSCHIERVA                | CH0093  | 405     | A.732                        | B.601 |       |      |        |         |   |
| TSCHINGEL                | CH0060  | 441     | A.733                        | B.602 |       |      |        |         |   |
| TSEUDET                  | CH0040  | 364     | A.734                        | B.603 |       |      |        |         |   |
| TSIDIJORE NOUVE          | CH0028  | 376     | A.735                        | B.604 |       |      |        |         |   |
| TUFTEBREEN               | NO      | 3352    | A.596                        | B.478 |       |      |        |         |   |
| TUNGNAARJOEKULL          | IS2214  | 3126    | A.290                        | B.237 | C.52  |      |        |         |   |
| TUNORSUAQ                | GL      | 3752    | A.238                        | B.194 |       |      |        |         |   |
| TUPUNGATO 01             | AR      | 2852    | A.26                         | B.12  |       |      |        |         |   |
| TUPUNGATO 02             | AR      | 2853    | A.27                         | B.13  |       |      |        |         |   |
| TUPUNGATO 03             | AR      | 2854    | A.28                         | B.14  |       |      |        |         |   |
| TUPUNGATO 04             | AR      | 2855    | A.29                         | B.15  |       |      |        |         |   |
| TWEEDSMUIR               | CA      | 3561    | A.154                        |       |       |      |        | D.9     |   |
| TZA DE TZAN              | IT0259  | 623     | A.416                        | B.358 |       |      |        |         |   |
| ULLUCHIRAN               | SU3021  | 836     | A.196                        | B.164 |       |      |        |         |   |

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|-----------------------------|---------|---------|------------------------------|-------|-------|---------|--------|
| ULLUKOL                     | SU3023  | 834     | A.197                        | B.165 |       |         |        |
| ULLUMALIENDERKU             | SU3024  | 833     | A.198                        | B.166 |       |         |        |
| UMBAL K.                    | AT0512  | 574     | A.120                        | B.106 |       |         |        |
| UMIARTORFIUP                | GL      | 3753    | A.239                        | B.195 |       |         |        |
| UNT. RIFFL KEES             | AT0713B | 605     | A.121                        | B.107 |       |         |        |
| UNT.GRINDELWALD             | CH0058  | 443     | A.736                        |       | BB.35 |         | F      |
| UNTERAAR                    | CH0051  | 450     | A.737                        |       | BB.36 |         |        |
| UNTERSULZBACH K.            | AT0503  | 582     | A.122                        | B.108 |       |         |        |
| URUASHRAJU                  | PE0005  | 221     | A.612                        | B.489 |       |         |        |
| URUMQI GLACIER NO. 1        | CN0010  | 853     | A.166                        | B.135 | C.25  | CCC.15  |        |
| URUMQI GLAC. NO. 1 E-BRANCH | CN0001  | 1511    | A.167                        | B.136 | C.26  | CCC.16  | CCCC.5 |
| URUMQI GLAC. NO. 1 W-BRANCH | CN0002  | 1512    | A.168                        | B.137 | C.27  | CCC.17  | CCCC.6 |
| VACAS                       | AR      | 2849    | A.30                         | B.16  |       |         |        |
| VAL TORTA                   | CH0118  | 466     | A.738                        | B.605 |       |         |        |
| VAL VIOLA OCC.              | IT0477  | 1156    | A.417                        | B.359 |       |         |        |
| VALDEZ                      | US0629  | 154     | A.796                        | B.641 |       |         |        |
| VALLE DEL VENTO             | IT0919  | 649     | A.418                        | B.360 |       |         |        |
| VALLEGGIA                   | CH0117  | 467     | A.739                        | B.606 |       |         |        |
| VALSOREY                    | CH0039  | 365     | A.740                        | B.607 |       |         |        |
| VALTOURNANCHE               | IT0289  | 621     | A.419                        | B.361 |       |         |        |
| VARTASJEKNA                 | SE0765  | 339     | A.634                        | B.508 |       |         |        |
| VAUDALETTA                  | IT0142  | 2379    | A.420                        | B.362 |       |         |        |
| VENEROCOLO                  | IT0581  | 665     | A.421                        | B.363 |       |         |        |
| VENTINA                     | IT0416  | 629     | A.422                        | B.364 |       |         |        |
| VERBORGENBERG F.            | AT0322  | 593     | A.123                        | B.109 |       |         |        |
| VERMUNTGL.                  | AT0104  | 482     | A.124                        | B.110 |       |         |        |
| VERNAGT FERNER              | AT0211  | 489     | A.125                        | B.111 | C.12  | CCC.9   | D.4    |
| VERRA (GRANDE DI)           | IT0297  | 1206    | A.423                        | B.365 |       |         |        |
| VERSTANKLA                  | CH0089  | 409     | A.741                        | B.608 |       |         |        |
| VERTEBRAE 12                | NZ      | 3032    | A.536                        |       |       |         | F      |
| VERTEBRAE 20                | NZ      | 3033    | A.537                        |       |       |         | F      |
| VICTORIA                    | NZ      | 3034    | A.538                        | B.432 |       |         |        |
| VILTRAGEN K.                | AT0505  | 581     | A.126                        | B.112 |       |         |        |
| VOLCAN NEVADO DEL HUILA     | CO      | 2689    | A.201                        |       |       |         | F      |
| VORAB                       | CH0085  | 413     | A.742                        | B.609 |       |         |        |
| W.TRIPP K.                  | AT1004  | 539     | A.127                        | B.113 |       |         |        |
| WALDEMARBREEN               | NO15403 | 2307    | A.597                        | B.479 | C.93  | CCC.58  |        |
| WALLENBUR                   | CH0071  | 428     | A.743                        | B.610 |       |         |        |
| WALSH                       | US      | 3579    | A.797                        |       |       |         | D.55   |
| WASSERFALLWINKL             | AT0705  | 565     | A.128                        | B.114 |       |         |        |
| WAXEGG K.                   | AT0401  | 590     | A.129                        | B.115 |       |         |        |
| WEISSEE F.                  | AT0201  | 523     | A.130                        | B.116 |       |         |        |
| WEST NUNATAK                | US      | 3555    | A.798                        |       |       |         | D.56   |
| WESTLICHER GRUEBLER F. W    | AT      | 2681    | A.131                        | B.117 |       |         |        |
| WHATAROA                    | NZ      | 2285    | A.539                        | B.433 |       |         |        |
| WHITBOURNE                  | NZ      | 1583    | A.540                        | B.434 |       |         |        |
| WHITE                       | NZ      | 3037    | A.541                        | B.435 |       |         |        |
| WHITE                       | CA2340  | 0       | A.155                        |       | C.23  | CCC.14  | CCCC.4 |
| WHYMPER                     | NZ      | 1609    | A.542                        | B.436 |       |         |        |
| WIELINGER K.                | AT0725  | 549     | A.132                        | B.118 |       |         |        |
| WILA LLUXITA                | BO      | 3722    | A.143                        |       | BB.16 |         |        |
| WILDGERLOS                  | AT0404  | 587     | A.133                        | B.119 |       |         |        |
| WILKINSON                   | NZ      | 1615    | A.543                        | B.437 |       |         |        |
| WILSON                      | NZ      | 3041    | A.544                        |       |       |         | F      |
| WINKL K.                    | AT1006  | 537     | A.134                        | B.120 |       |         |        |
| WOLVERINE                   | US0411  | 94      | A.799                        | B.642 | C.128 | CCCC.34 |        |
| WURTEN K.                   | AT0804  | 545     | A.135                        | B.121 | C.13  | CCC.10  |        |
| YAHTSE                      | US      | 3581    | A.800                        |       |       |         | D.57   |
| YAKUTAT                     | US1303  | 1381    | A.801                        |       |       |         | D.58   |
| YALA                        | NP0004  | 912     | A.443                        |       |       |         | D.36   |
| YALIK                       | US      | 3797    | A.802                        | B.643 |       |         |        |

| GLACIER NAME                    | PSFG NR | WGMS ID | DATA TABLE AND RECORD NUMBER |       |       |        |        |        |     |
|---------------------------------|---------|---------|------------------------------|-------|-------|--------|--------|--------|-----|
| YANAMAREY                       | PE0004  | 226     | A.613                        | B.490 | C.95  | CCC.60 |        |        |     |
| YAWNING                         | US2050  | 75      | A.803                        | B.644 | C.129 |        |        |        |     |
| YOCHE LUNGPA                    | IN0079  | 3629    | A.307                        | B.253 |       |        |        |        |     |
| ZAI DI DENTRO / ZAY F. INNERER  | IT0749  | 1515    | A.424                        | B.366 |       |        |        |        |     |
| ZAI DI FUORI / ZAY F. AEUSSERER | IT0751  | 609     | A.425                        | B.367 |       |        |        |        |     |
| ZAI DI MEZZO / ZAY F. MITTLERER | IT0750  | 1127    | A.426                        | B.368 |       |        |        |        |     |
| ZETTALUNITZ K.                  | AT0508  | 578     | A.136                        | B.122 |       |        |        |        |     |
| ZINAL                           | CH0022  | 382     | A.744                        | B.611 |       |        |        |        |     |
| ZONGO                           | BO5150  | 1503    | A.144                        | B.125 | BB.17 | C.16   | CCC.13 | CCCC.3 | D.7 |
| ZORA                            | NZ      | 1593    | A.545                        | B.438 |       |        |        |        |     |

